No.01

Oki Data CONFIDENTIAL

C9850MFP/CX3641MFP/ ES3640ProMFP Scanner Maintenance Manual

ODA/OEL/AOS

[Rev. 3]

Related drawings

Drawing No.	Name
43627001TL	C9850MFP/CX3641MFP/ES3640ProMFP Scanner Disassembly for Maintenance
43627001TR	C9850MFP/CX3641MFP/ES3640ProMFP RSPL

BOM		Use for		Certification Body	
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2	2008-10-17	SBA-0066	Addition of Country Code change Procedure	M.Tomaru	T.Sudo
3	2010-04-02	SCJ-0155	Revision of All pages	Kazuo Nakazawa	Koichi Negishi

Approval Hirotomo Nonaka	Design Takashi Saito	Name C9850MFP/CX3641MFP ES3640ProMFP Scanner Maintenance Manual	
Check Ryuichi Kohara			
Date 2007-11-14	Oki Data Corporation	Drawing No. 43627001TH	1/113

Document Revision History

Rev.No.	Date	Corrected items			Person in charge
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1	2007-11-14			ISSUE	MFP11 T. Saito
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3	2010-04-02	All	All	Revised all pages.	PED23 K. Nakazawa

CONTENTS

1. OVERVIEW

This document describes how to maintain C9850MFP scanners. Established for maintenance personnel, the manual includes the operating procedures (the scanner installation, disassembly and troubleshooting procedures) performed by maintenance personnel. Before C9850MFP scanner handling, carefully read the document to have broad C9850MFP scanner knowledge.

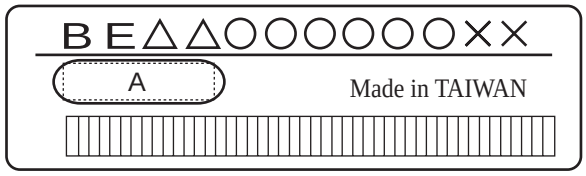
1.1 Related Drawings

Check the model number in the area A of each scanner to maintain (see the figure below).

Model Number: N33135A

Related Drawings:

43627001TR	C9850MFP/CX3641MFP/ES3640ProMFP Scanner RSPL
43627001TL	C9850MFP/CX3641MFP/ES3640ProMFP Scanner Disassembly for Maintenance



Serial Number Label

1.2 Notes for Maintenance and Servicing

(1) Before disassembling a C9850MFP scanner, be sure that its power cord is unplugged from its AC outlet. In any situation, do not plug or unplug its connector with the scanner on.

(2) When reassembling a unit, be careful not to drop small parts or screws inside the unit. A dropped part left in it may cause a malfunction.

(3) Do not disconnect connectors by pulling their cables. Disconnect them by holding them.

(4) Carry scanning head units in a static bag.

(5) Keep document glass table surfaces clean. Wipe any dirt off them with a dry clean cloth.

(6) Be careful not to hurt fingers or hands when disassembling or assembling a unit.

1.3 Product Specifications

C9850MFP scanners are designed to meet the following product specifications:

Table 1-1 Product Specifications

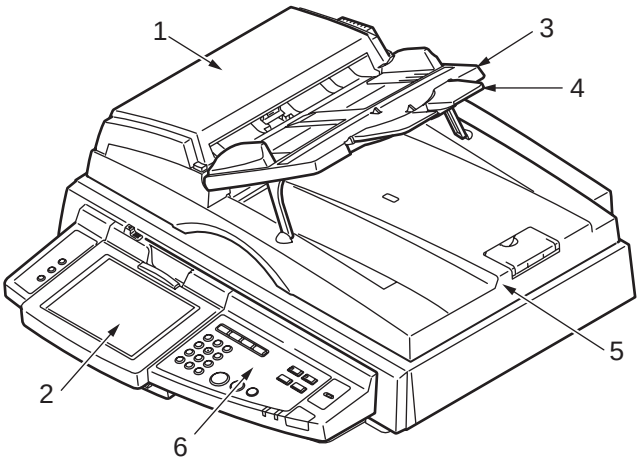
Item	
Dimension (mm)	670mm (W) × 690mm (D) × 370mm (H) Packed: 796 mm × 746 mm × 510 mm
Weight	Flatbed: 14.1 kg ADF: 9.3 kg Gross Weight: 30.4 kg Net Weight: 23.4 kg
Scanning Speed	(ADF) 40ppm (300 × 300dpi color/A4/LEF) 10ppm (600 × 300dpi color/A4/LEF) 40ppm (600 × 300dpi grayscale/A4/LEF) 20ppm (600 × 600dpi grayscale/A4/LEF) ppm: pages per minute (Flatbed) 3sec (300 × 300dpi color/A4/LEF) 6sec (600 × 600dpi color/A4/LEF) 3sec (600 × 300dpi grayscale/A4/LEF) 3sec (600 × 600dpi grayscale/A4/LEF)
Warm-up Time (scanner)	Warm-up Time: less than 20 seconds (from 20 to 35℃) Warm-up Time: less than 30 seconds (from 10 to 20℃)
Optical Resolution	600dpi (ADF, flatbed)
Image Processor RAM	128MB × 2
ADF Pad Life (Scanner)	100,000 scan pages (20-lb. paper)
ADF Roller Life (Scanner)	200,000 scan pages (20-lb. paper)
Imaging Depth (Input)	48 bits
Imaging Depth (Output)	24 bits
Scan Control Core CPU	Tensilica's 32-bit CPU
MTTR	< 30 min.
Scan Life	F/B: 200,000 scan pages or 5 years ADF: 800,000 scan pages or 5 years
MTBF	5000 hours
Daily Duty Cycle	2,500 pages per day
ADF	
Scanning Area	11.8" × 17" (A3)
Capacity	60 g/m^2 - 105 g/m^2 (16 - 28 lb.) 0.080 mm - 0.110 mm
Weight	9.3Kg

1.4 Product Configuration

This section describes the configuration of each C9850MFP scanner.

1.4.1 External Views

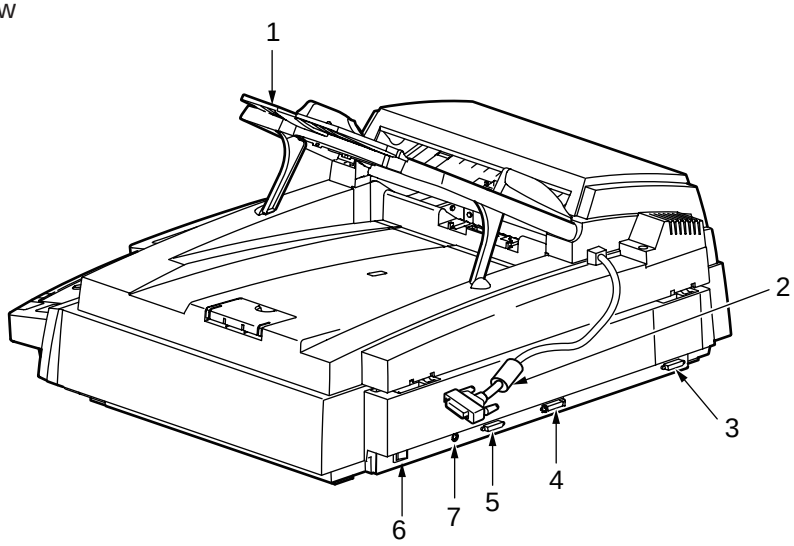
1.4.1.1 Front View



1. ADF Front Cover
2. LCD Display
3. ADF Paper Tray
4. ADF Paper Support
5. Document Cover
6. Operator Panel

Figure 1-1 External C9850MFP Scanner Views (1/2)

1.4.1.2 Rear View

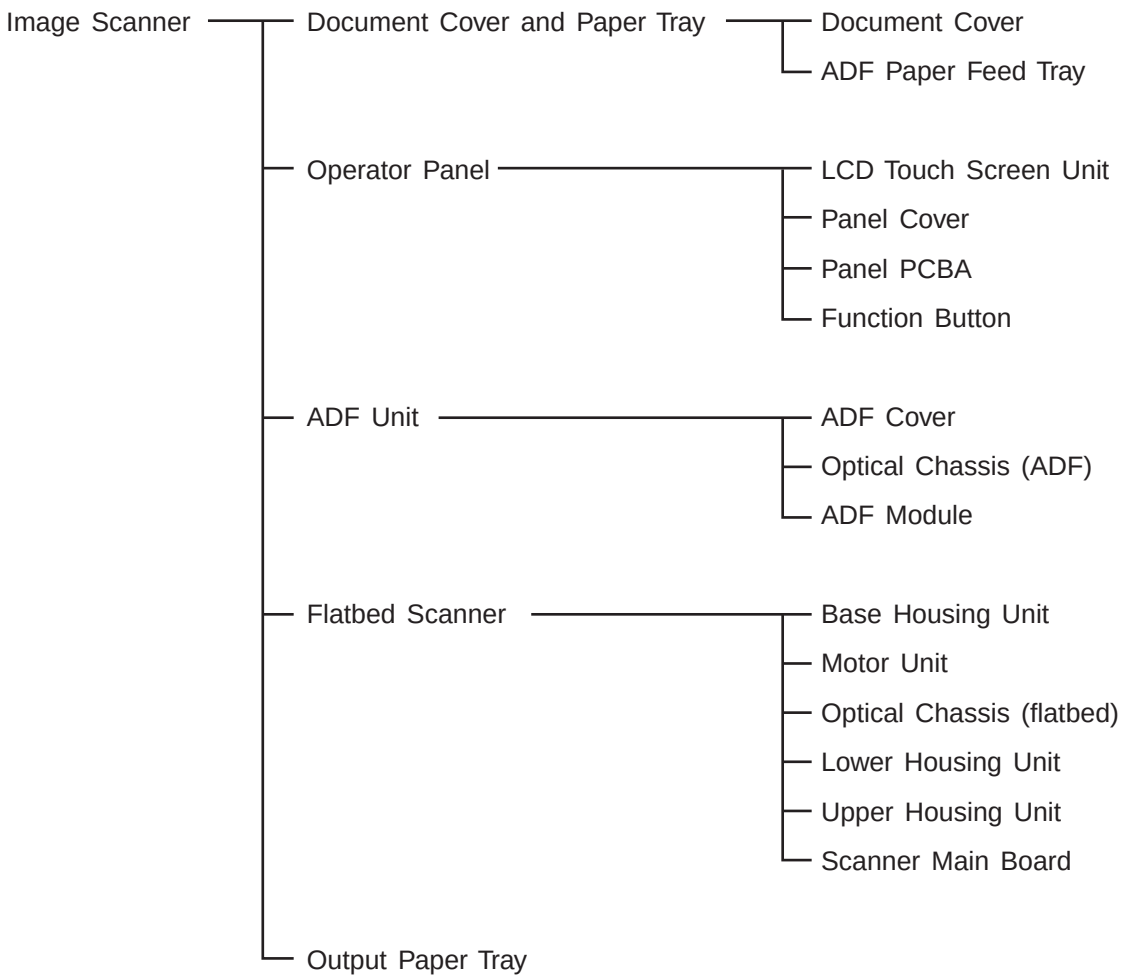


1. ADF Paper Tray: To hold multiple originals.
2. ADF Cable: To connect ADF to main unit.
3. Control Port: To connect printer.
4. ADF Port: To connect ADF cable.
5. Data Port: To connect printer.
6. Power Switch: To turn on and off scanner.
7. Power Jack: To connect power.

Figure 1-1 External C9850MFP Scanner Views (2/2)

1.4.2 Mechanical Configuration

Each C9850MFP scanner consists of the following components:



1.5 Description of Operations

1.5.1 Introduction

This section describes the operations of each C9850MFP scanner. The microprocessor of the scanner controls the following functions of the scanner:

- Interface
- Scan module operation
- ADF operation
- Reading mode (imaging depth, paper size and halftone) selection

Figure 1-2 shows behavior sequences.

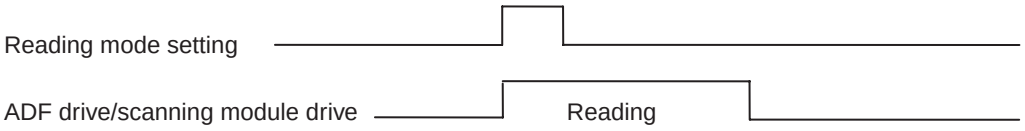


Figure 1-2 Operation Sequences

1.5.2 Mechanical Operations

1.5.2.1 Scan Module Operation

A two-phase stepping motor operates transportation. Running with a 1.8-degree step angle in a full-step mode, the motor controls micro-intervals to operate a scan module 1/600 inch per step.

1.5.2.2 ADF Mechanism Operation

A two-phase stepping motor operates an ADF. Running with a 1.8-degree step angle in a full-step mode, the motor controls micro-intervals to allow paper to be transported 1/300 inch per step.

1.5.3 System Description

C9850MFP scanners can simultaneously scan the both sides of each document sheet. Each of them consists of one main control board, two optical modules, one ADF module and one LCD panel.

1.5.3.1 System Diagram

Figure 1-3 shows a system block diagram of each C9850MFP scanner.

The main control board of the scanner controls all the modules of the scanner. The board contains an internal 32-bit CPU of Tensilica, (two) flatbed and ADF image processing ASICs, (eight) 32-MB SRDRAMs, (two) flash memory devices, and (two) flatbed and ADF CCD input signal processing A/D converters.

The power source of the scanner is an external power adapter (24V/4.0A), some different internal voltages in the scanner.

- +24V supplied directly from an adapter, and used by a flatbed and an ADF motor.
- +2.5V converted with a regulator (AME8810DEGT), and supplied to a flatbed ASIC and an ADF ASIC.
- +5V converted with an ASIC1563, and supplied to all 5V logic circuits.
- +3.3V converted with an LM ASIC1596, and supplied to a flatbed ASIC, an ADF ASIC, DRAMs, flash memory devices and some 3.3V logic circuits.

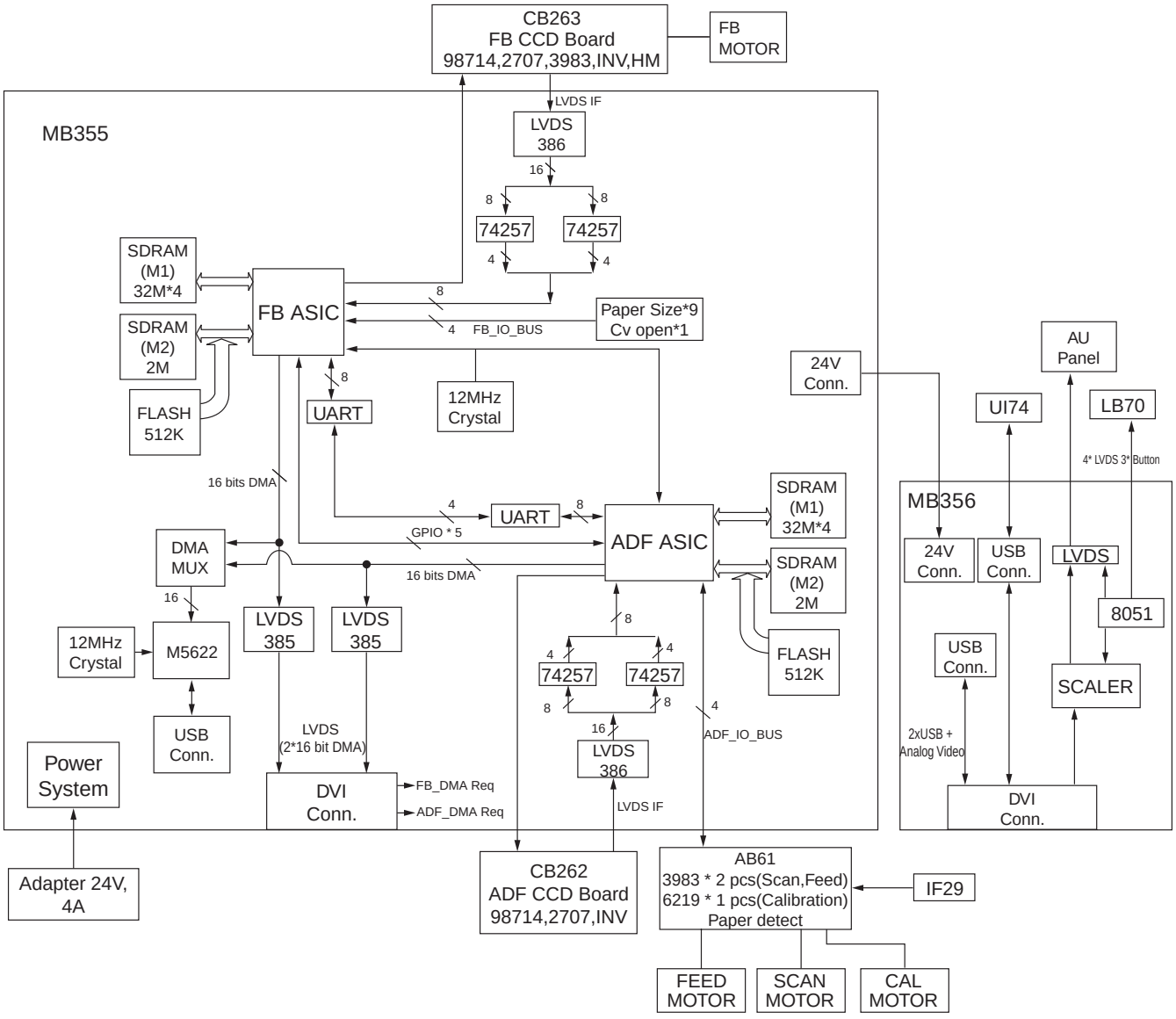


Figure 1-3 Scanner Block Diagram

1.5.3.2 Video Circuit

The video circuit of each C9850MFP scanner includes a CCD drive circuit and a CCD signal processing circuit.

1 CCD Drive Circuit
Each C9850MFP scanner uses a CCD drive circuit so as that its CCD produces accurate signals (accurate image data).

Flatbed Video Circuit Connector (J8) Pin Assignment

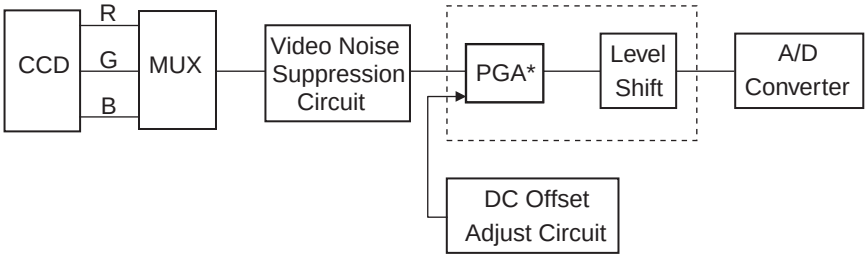
Pin No.	Name	Function
1	INV GND	Inverter Ground
2	24V INV	Inverter 24V Power
3	24VM	Motor 24V Power
4	MGND	Motor Ground
5	MGND	Motor Ground
6	VREF1	Motor Current Control1
7	VREF2	Motor Current Control2
8	DIR	Motor Direction Control
9	STEP	Motor Step Signal
10	M SLP N	Motor Sleep Control
11	MS1	Motor Mode Control1
12	MS2	Motor Mode Control2
13	DGND	Digital Ground
14	5VD	+5V Power
15	RST N	Motor Reset
16	SH REQ	Shift Control
17	SDATA	AFE Serial Interface Data
18	SCLK	AFE Serial Interface Clock
19	SEN N	AFE Serial Interface Enable
20	DGND	Digital Ground
21	TXOUT0+	LVDS Data0+
22	TXOUT0-	LVDS Data0-
23	TXOUT1+	LVDS Data1+
24	TXOUT1-	LVDS Data1-
25	TXOUT2+	LVDS Data2+
26	TXOUT2-	LVDS Data2-
27	TXCLK+	LVDS Frame Clock+
28	TXCLK-	LVDS Frame Clock-
29	INCLK+	LVDS Clock input+
30	INCLK-	LVDS Clock input-
31	HMSEN	Home Position Sensor
32	10V CCD	CCD Power

ADF Video Circuit Connector (J11) Pin Assignment

Pin No.	Name	Function
1	PLUG IN	ADF Plug Detect in
2	5VD	+5V Power
3	TXOUT0-	LVDS Data0-
4	TXOUT0+	LVDS Data0+
5	TXOUT1-	LVDS Data1-
6	TXOUT1+	LVDS Data1+
7	TXOUT2-	LVDS Data2-
8	TXOUT2+	LVDS Data2+
9	TXCLK-	LVDS Frame Clock-
10	TXCLK+	LVDS Frame Clock+
11	INCLK+	LVDS Clock Input+
12	INCLK-	LVDS Clock Input-
13	DGND	Digital Ground
14	DGND	Digital Ground
15	24V CCD	CCD Power
16	3.3VD	+3.3V Power
17	IO BUS0	Data Bus0
18	IO BUS2	Data Bus2
19	24VM	Motor 24V Power
20	24VM	Motor 24V Power
21	24VM	Motor 24V Power
22	DGND	Digital Ground
23	DGND	Digital Ground
24	STEP	Motor Step Signal
25	IO CS0	IO CS0
26	24V INV	Inverter 24V Power
27	INV GND	Inverter Ground
28	NC	No Connection
29	INV GND	Inverter Ground
30	NC	No Connection
31	NC	No Connection
32	NC	No Connection
33	SDATA	AFE Serial Interface Data
34	RST N	Motor Reset
35	SH REQ	Shift Control
36	SCLK	AFE Serial Interface Clock
37	SEN N	AFE Serial Interface Enable
38	NC	No Connection

Pin No.	Name	Function
39	NC	No Connection
40	NC	No Connection
41	NC	No Connection
42	IO BUS1	Data Bus1
43	MGND	Motor Ground
44	IO BUS3	Data Bus3
45	MGND	Motor Ground
46	MGND	Motor Ground
47	MGND	Motor Ground
48	IO CS1	IO CS1
49	IO CS2	IO CS2
50	PLUG OUT	ADF Plug Detect Out

2. CCD Signal Processing Circuit



The video noise suppression circuit eliminates reset noise and the CCD's low-frequency noise and, after that, the PGA performs video gain control. The level shift circuit biases output of the PGA so as that the A/D converter's requests are met. The DC offset adjust circuit adjusts the bias levels of video signals.

* PGA: Programmable gain amplifier

1.5.3.3 Sensor Input

Sensor input involves a home position sensor and an ADF cover sensor.

1. Home Position Sensor

A photo sensor detects the home position of a transport motor. The following shows transmission to the receiving circuit of the sensor:

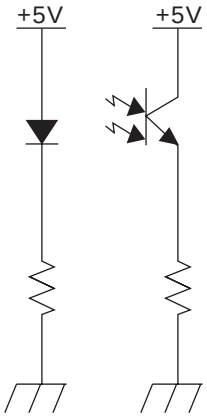


Figure 1-4 Home Position Sensor

The sensor detects the home position when a signal passes between an LED and a photo transistor.

2. ADF Cover Sensor

An ADF cover sensor behaves in the same manner as the home position sensor described above.

2. INSTALLATION

This chapter describes C9850MFP scanner unpacking, installation and opepration check procedures.

2.1 Notes on Installation

Before unpacking and installing a C9850MFP scanner, read the following notes:

- Do not install the scanner in a place that vibrates.
- Do not install the scanner in a place exposed to direct sunlight, or near a heating element.
- Do not install the scanner in a place where its ventilation hole is blocked.
- Do not install the scanner in a very humid or dusty place.
- Do not use sockets with possibly noise generating equipmemt, for example, an air conditioner, connected.
- Use a proper AC power supply.
- Install the scanner on a flat surface.

2.2 Unlocking Scanner

During transportation of a C9850MFP scanner, its scanning unit should be locked to be protected from damage. Be sure to unlock the scanning unit before using the scanner:

1) Be sure of the position of the lock switch on the lower left of the scanner.
2) Move the carriage lock switch in the unlock position.
3) Put the carriage lock switch cover on the switch.

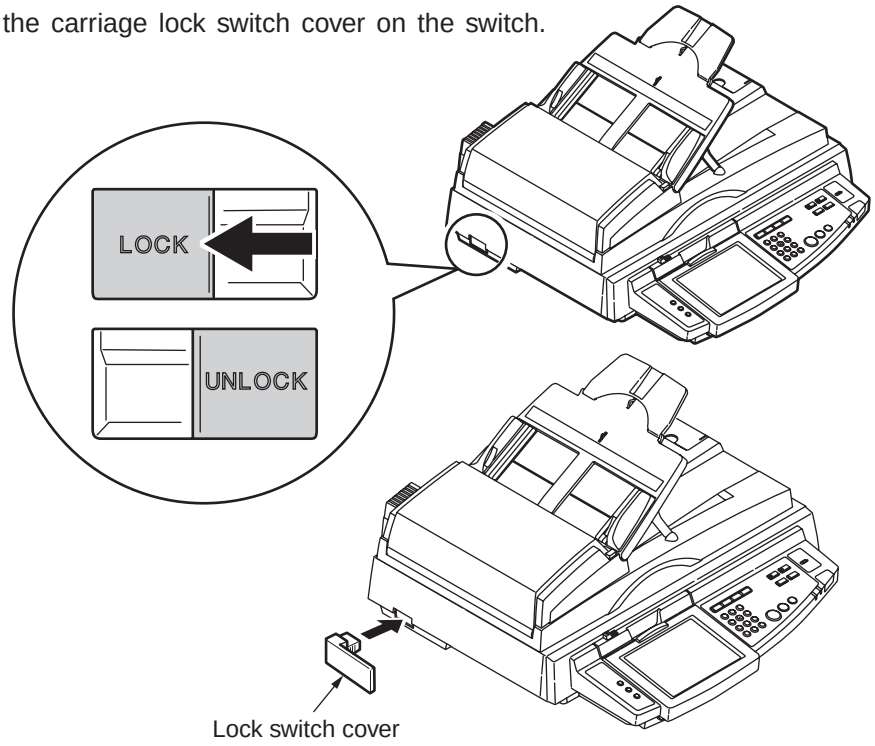
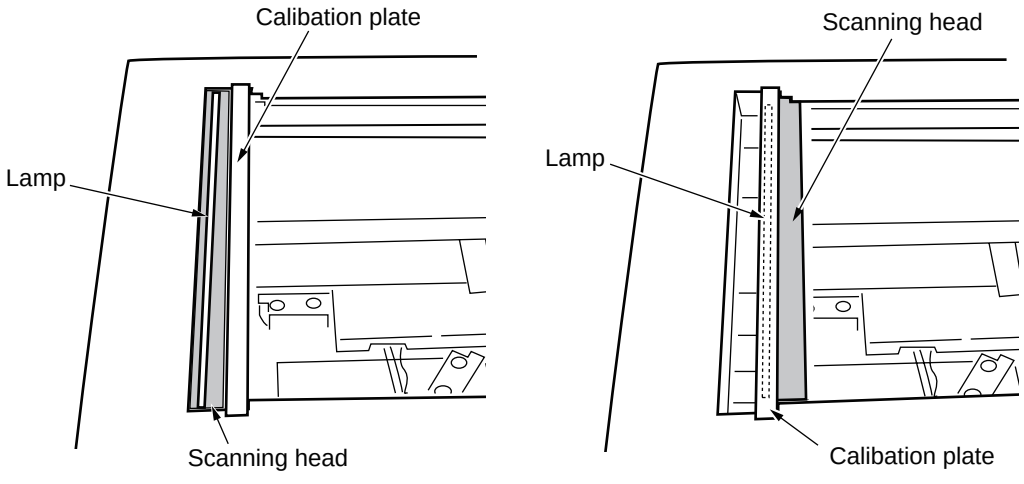


Figure 2-1 Unlocking the Scanning Unit

Note:

Before moving a C9850MFP scanner because of a reason other than transporting it, be sure to lock it. To lock a C9850MFP scanner:

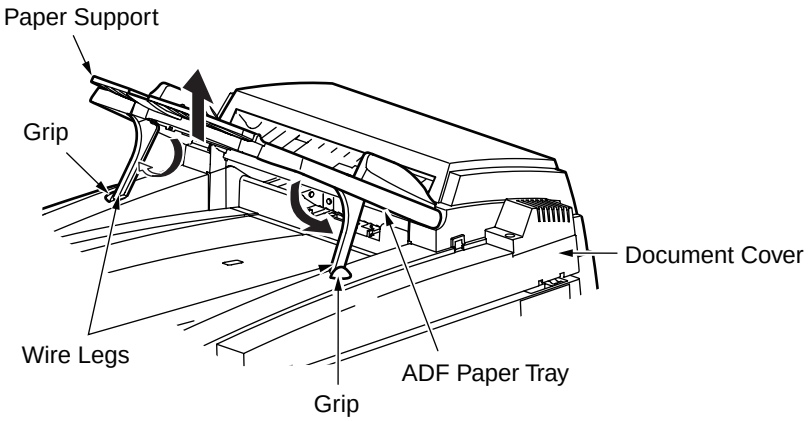
1. Turn off the C9850MFP scanner.
2. When the scanning head is not placed at the left end of the scanner, turn on the scanner, move the scanning head back to the left end and turn off the scanner.
3. Move the carriage lock switch to the lock position.
4. Put the carriage lock switch cover.



2.3 Setting Up ADF Paper Tray

The ADF (auto document feeder) paper tray of each C9850MFP scanner should be equipped with its ADF (auto document feeder) paper tray and paper support. The ADF paper tray and paper support must be installed properly before using the auto document feeder:

1) Raise the ADF paper tray to an angle of about 45 degrees as shown below.
2) Extend the two wire legs on the ADF paper tray, and hold them with the grips on the document cover.



3) The wire legs stand firmly as shown:

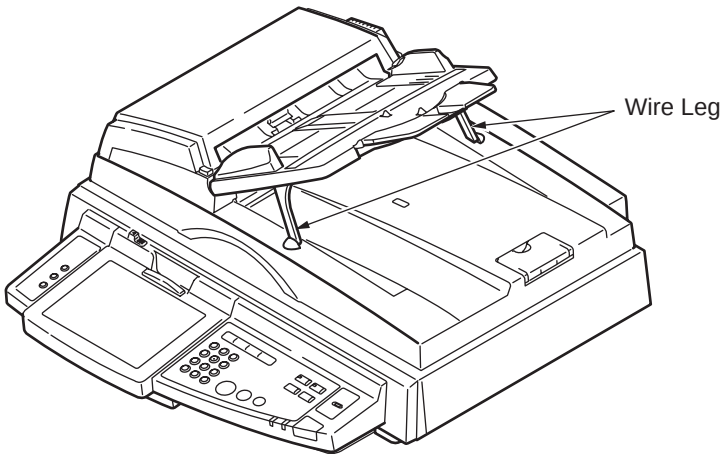


Figure 2-2 Installing ADF Paper Tray

2.4 Checking with Menu Map

Before moving a C9850MFP scanner, check with a printer menu map that the scanner is properly configured. The following shows how to do that:

(1) Load A4 paper on an appropriate tray.

(2) Be sure READY TO PRINT appears.

(3) Press the down-arrow ▽ button more than once, select PRINT PAGE for C9850 and press ENTER ◯.

(4) Press the down-arrow ▽ button, select Network Information for C9850 and press ENTER ◯.

(5) Press the Enter ◯ button.

Sample C9850/C9750 Menu Map:

Configuration
C9850 Generated: 11/25/05 15:47:02 1

Server Info
- Password Enabled: Yes
- Memory (MB): 1280
- Software: EFI Fiery System 5.5e
- Version: eOz4.094a_CDP (ODA)
- Disk Size (MB): 16685
- Free Disk Space (MB): 16530
- System
  - Serial Number: AF57005190
  - Asset Number:
  - PI: 00.00.97
  - LO: 00.10.40
  - S: 00.01.03
  - I: 00.01.00
  - DU: 00.01.02
  - FI: 00.00.14
  - T2: 00.01.00
  - T3: 00.01.00
  - T4: 00.01.00

Server Setup
- Server Name: C9800G-36F4E2
- Print Start Page: No
- Use Character Set: Mac
- Group Printing: No
- Enable Printed Queue: Yes
  - Jobs to Save: 30
- Preview While RIP: No
- Time Zone: Tokyo (JST)
- Location:

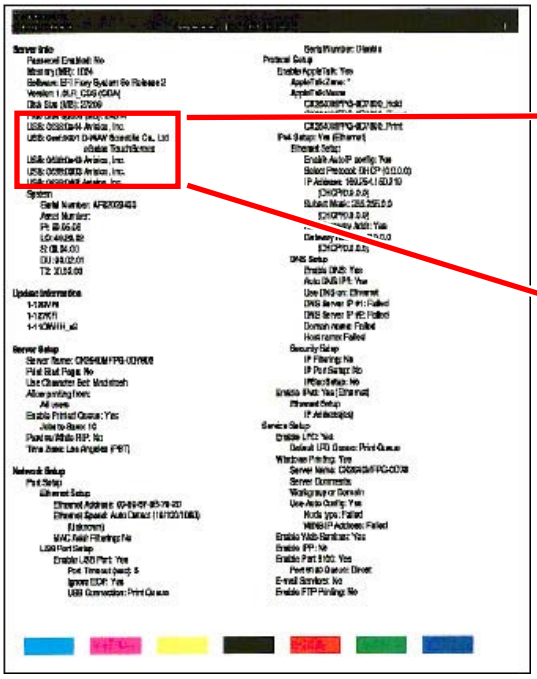
Network Setup
- Port Setup
  - Ethernet Setup
    - Enable Ethernet: Yes
    - Ethernet Address: 00-80-87-94-0E-1A
    - Ethernet Speed: Auto Detect (100Mbps Full-Duplex)
- Protocol Setup
  - Enable AppleTalk: Yes
    - AppleTalk Zone: *
    - AppleTalk Name
      - C9800G-36F4E2_Print
      - C9800G-36F4E2_Direct
      - C9800G-36F4E2_Hold
  - Enable TCP/IP: Yes (Ethernet)
    - Ethernet Setup
      - Enable AutoIP config: No
      - IP Address: 10.49.41.180
      - Subnet Mask: 255.255.255.0
    - Auto Gateway Addr: No
    - Gateway Address: 10.49.41.254
    - DNS Setup
      - Enable DNS: Yes
      - Auto DNS IP: No
      - DNS Server IP #1: 127.0.0.1
      - DNS Server IP #2: 127.0.0.1
      - Domain name:
      - Host name: C9800G-36F4E2
    - Security Setup
      - IP Filtering: No
      - IP Port Setup: No
  - Enable IPX (Novell): Yes
    - Frame Type: Auto Frame Type
    - No Type found.
- Service Setup
  - Enable LPD: Yes
  - Enable PServer: No
  - Windows Printing: No
  - Enable Web Services: Yes
  - Enable IPP: No
  - Enable Port 9100: Yes
    - Port 9100 Queue: Direct
  - E-mail Services: Yes
    - Print via Email: Yes
    - Outgoing Server: 10.113.10.107
    - Incoming Server: 10.113.10.107
    - Server Type: POP3
    - Fiery E-mail Addr: odc-p21ad30@oki.com
    - Admin E-mail addr: yo-fujisawa@oki.com
    - Account Name: odc-p21ad30
    - Poll Interval (sec): 300
    - Timeout (sec): 60
    - Max Scan File Size: 4000 KB
  - Enable FTP Receiving: Yes
    - Timeout (sec): 300
  - Enable Rendezvous: Yes
  - Enable SNMP: Yes

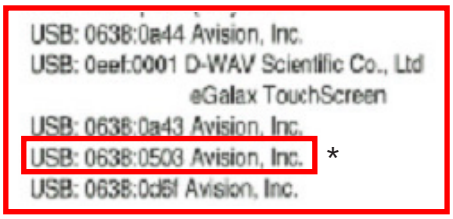
Parallel Setup
- Enable Parallel Port: Yes
  - Ignore EOF: Yes
  - Parallel Connection: Print Queue

USB Setup
- Enable USB Port: Yes
  - Ignore EOF: Yes
  - USB Connection: Print Queue
  - Serial Number: Enable

Printer Setup

2.4.1 Information to Check (on First Sheet)





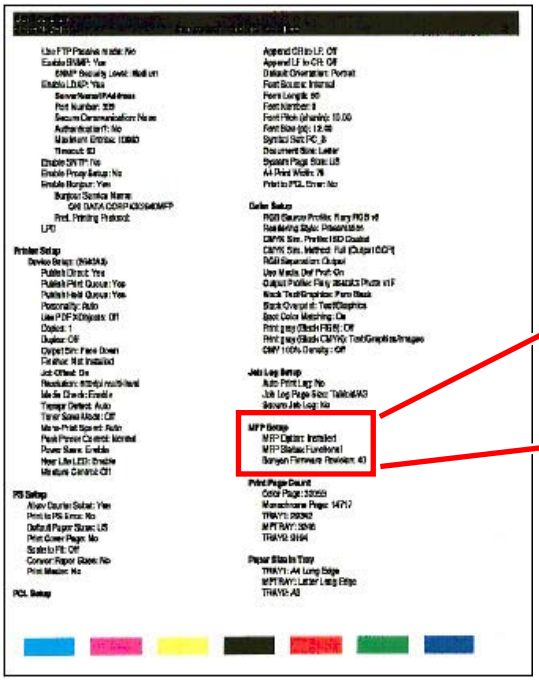
* Be sure the sheet shows the information.

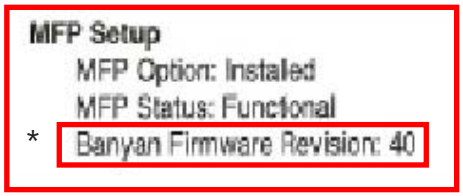
When output with the scanner in the power save mode, the sheet shows the following instead of it:

C9850MFP: USB: 0638: 0505

C9750MFP: USB: 0638: 0503

2.4.2 Information to Check (on Second Sheet)





* Be sure the sheet shows the information.

When output with the scanner in the power save mode, the sheet shows the following with no number:

Banyan firmware Revision:

2.5 Loading Original Document

2.5.1 Loading Auto Document Feeder

1. Be sure the document to scan is free of staples and clips and not torn.
2. When the document has multiple pages, fan the pages to avoid paper jams. The ADF can hold 50 A3 pages of (80g/m^2 or 20 lb.), or 100 pages of (80g/m^2 or 20 lb.) non-A3 paper.

3. Tap the edges of the stack to make it flush. Load the document on the ADF with the text face up.

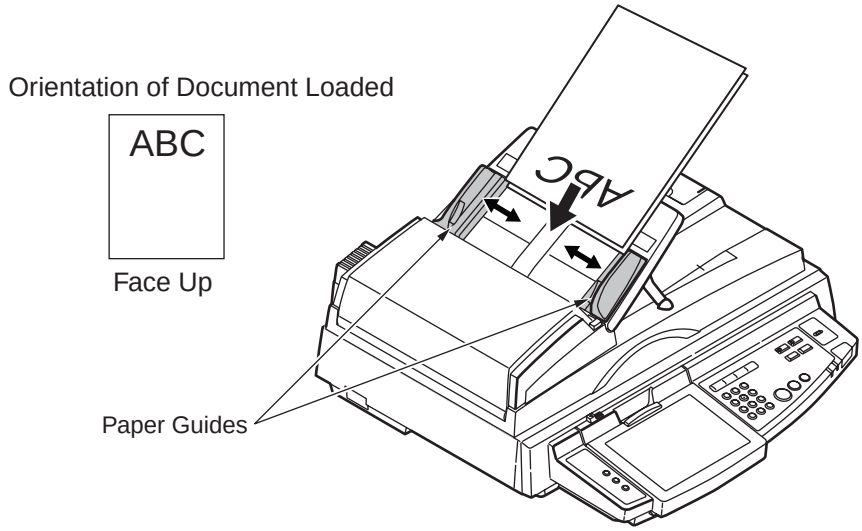


Figure 2-3 Loading ADF

4. Adjust the paper guides so as not to leave space between the document and them.

2.5.2 Loading Document Glass

With the text face down, place an original document on the document glass.

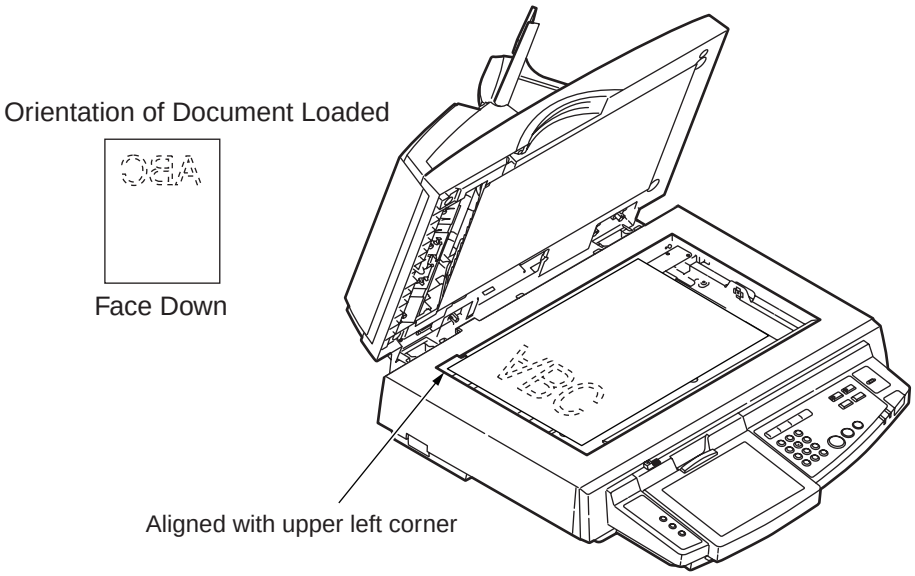


Figure 2-4 Loading Flatbed

3. PROBLEM SOLVING

This chapter describes troubleshooting, providing a troubleshooting list.

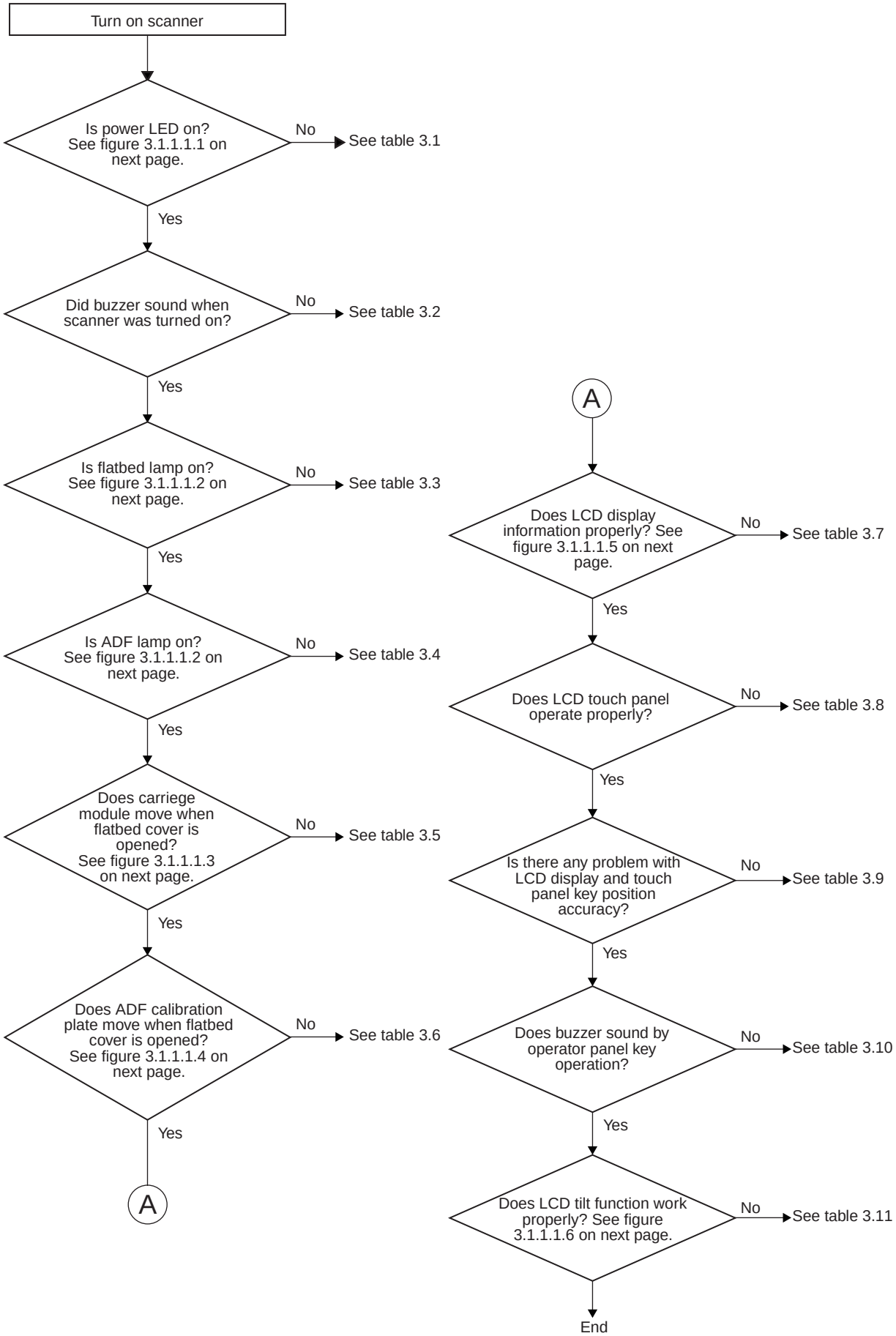
3.1 Troubleshooting

3.1.1 Troubleshooting Flowcharts

**** Notes:***

See section 6.2.2.5 for detaching the main PCB from a C9850MFP scanner. When checking voltage, leave the main PCB on its sheet metal and disconnect no connectors.
See section 6.2.2.2 for detaching the right panel from a C9850MFP scanner.

3.1.1.1 Troubleshooting Flowchart: Power-on



Flowchart 3-1

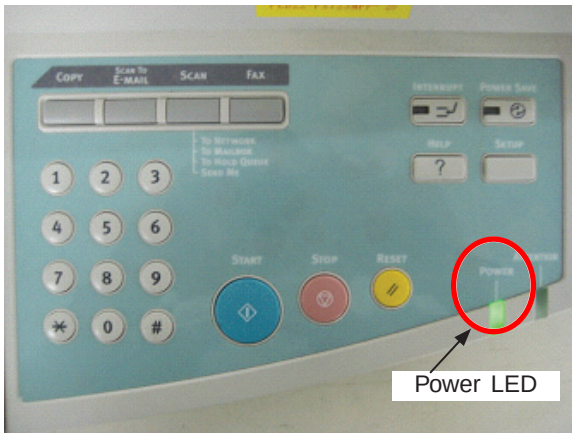


Figure 3.1.1.1.1

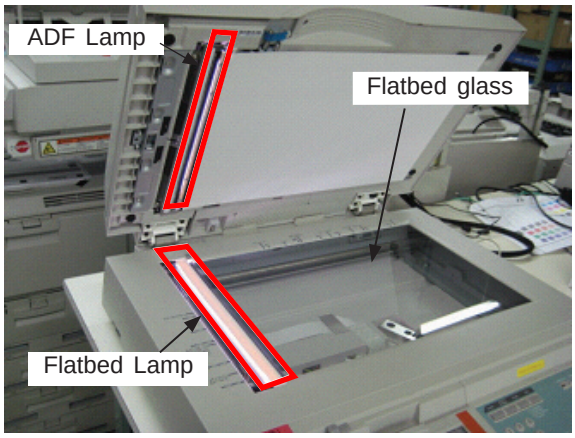


Figure 3.1.1.1.2

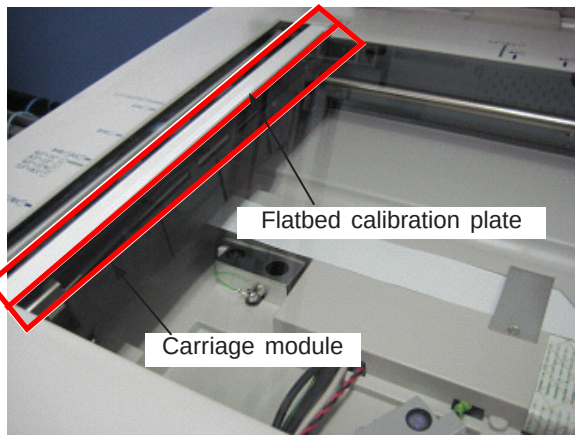


Figure 3.1.1.1.3

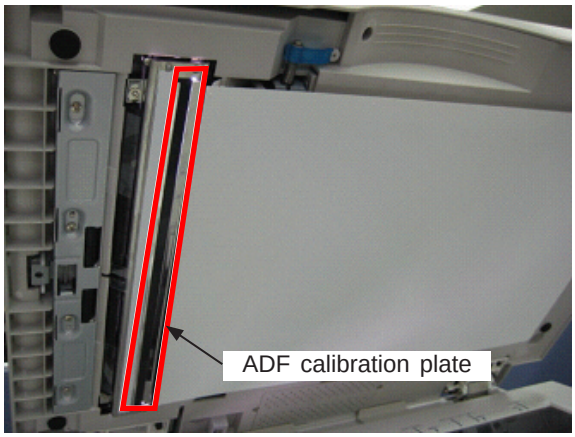


Figure 3.1.1.1.4

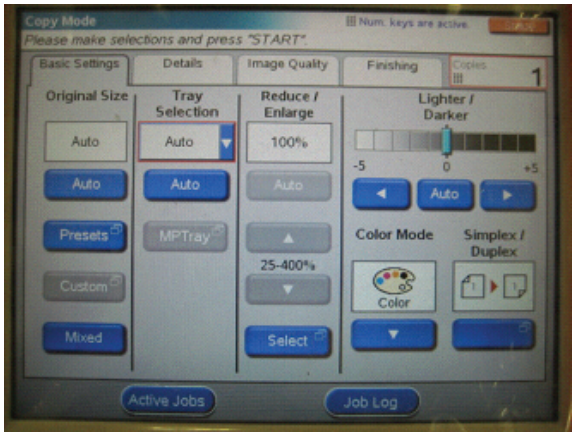


Figure 3.1.1.1.5

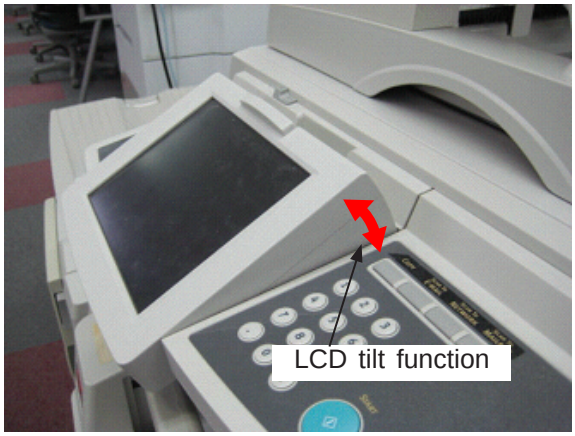
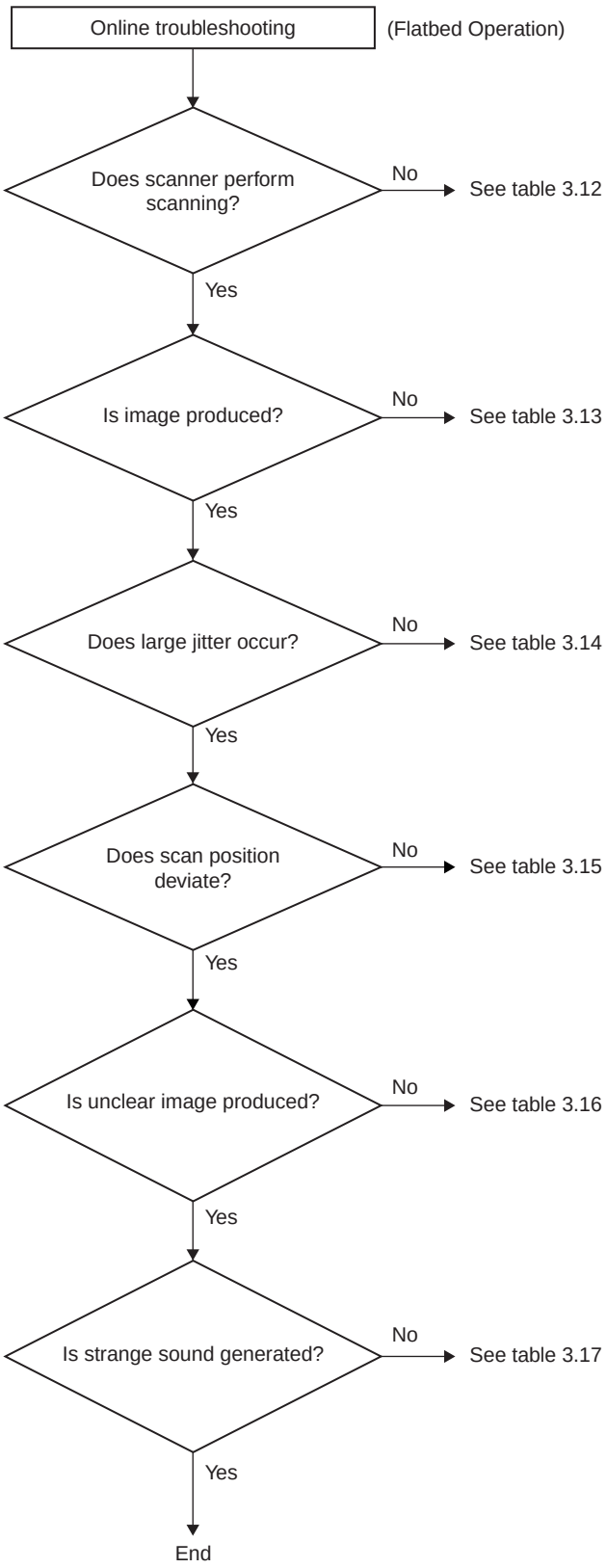


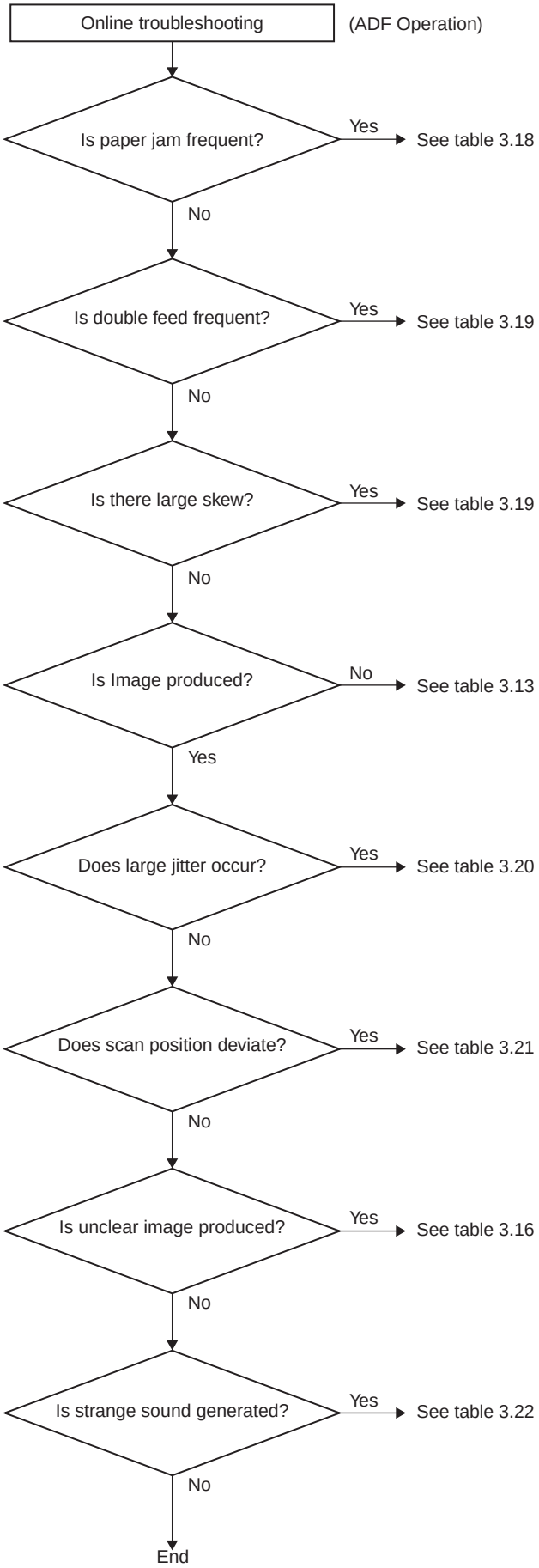
Figure 3.1.1.1.6

3.1.1.2 Troubleshooting Flowchart - Flatbed operation



Flowchart 3-2

3.1.1.3 Troubleshooting Flowchart - ADF operation



Flowchart 3-3

3.1.2 List

This section describes a list that provides detailed troubleshooting information.

3.1.2.1 Power LED Does Not Turn On

Table 3.1

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor AC outlet connection	None	Visual check	Check the AC outlet for proper connection.	None
Poor AC tap connection	None	Visual check. See figure 3.1.2.1.1.	Check any AC tap for proper connection.	Only when the scanner uses an AC tap.
Poor AC adapter connection	None	Visual check. See figure 3.1.2.1.2.	Check the AC adapter for proper connection.	None
Poor DC connector connection	None	Visual check. See figure 3.1.2.1.3.	Check the 24V DC connector for proper connection.	None
Scanner staying off	None	Visual check. See figure 3.1.2.1.3.	Turn on the scanner.	None
Poor J1 connector connection	Main PCB MB355	Visual check. See figure 3.1.2.1.4.	Connect the connector J1.	None
AC adapter output voltage failure	AC adapter	Output voltage (+24V) * In section 3.2, see the point 1 to check.	Replace the AC adapter (Part No. 43758701).	None
Faulty PCB. See figures 3.1.2.1.4 and 3.1.2.1.5.	Main PCB (MB355), Operation control PCB (UI74)	Check for operator panel power supply (+24V) * In section 3.2, see the point 1 to check.	Replace the main PCB part No. 43775401 (ODA)/43775402 (AOS)/43775403 (OEL) or the right panel part No. 43774901 (OEL)/ 43774902 (AOS)/ 43774903 (ODA).	None
Poor connection between operation control PCB and main PCB	Operation control PCB (UI74), Main PCB (MB355)	Visual check. See figures 3.1.2.1.4 and 3.1.2.1.5.	Connect the connectors J2 (UI74) and J12 (MB355).	None

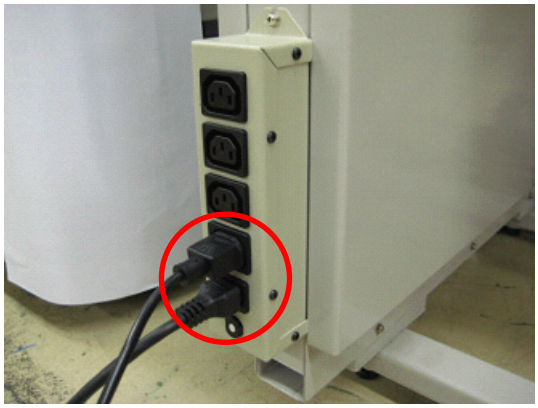


Figure 3.1.2.1.1

Figure 3.1.2.1.2

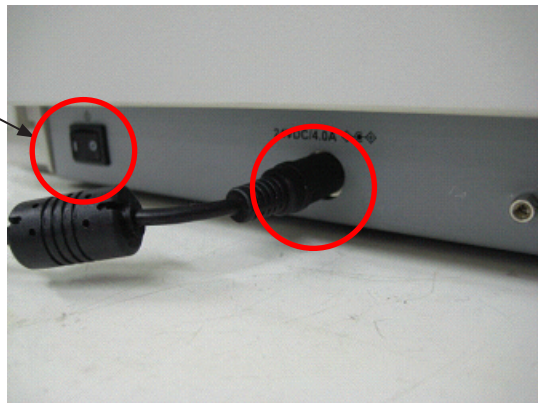


Figure 3.1.2.1.3

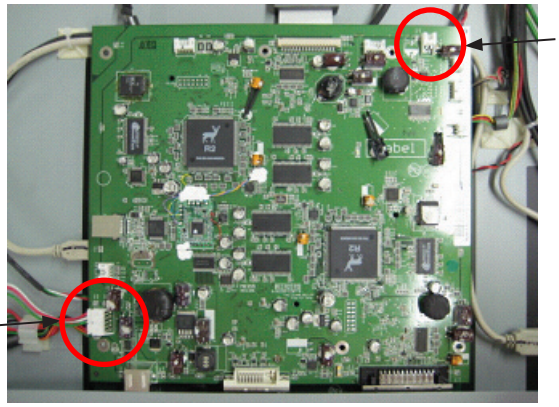


Figure 3.1.2.1.4 Main PCB (MB355)

Figure 3.1.2.1.5 Operation control PCB (U174)

3.1.2.2 Buzzer Does Not Sound When Scanner is Turned On

Table 3.2

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between operator control PCB and Main PCB	Operation control PCB (UI74), Main PCB (MB355)	Visual check. See figures 3.1.2.2.1 and 3.1.2.2.2.	Connect the connectors J2 (UI74) and J12 (MB355).	None
Faulty PCB. See figures 3.1.2.1.4 and 3.1.2.1.5.	Main PCB (MB355), Operation control PCB (UI74)	Check for operator panel voltage (+24V) * In section 3.2, see the point 2 to check.	Replace the main PCB part No. 43775401 (ODA)/ 43775402 (AOS)/43775403 (OEL) or the right panel part No. 43774901 (OEL)/ 43774902 (AOS)/43774903 (ODA).	None

Figure 3.1.2.2.1 Operation control PCB (U174)

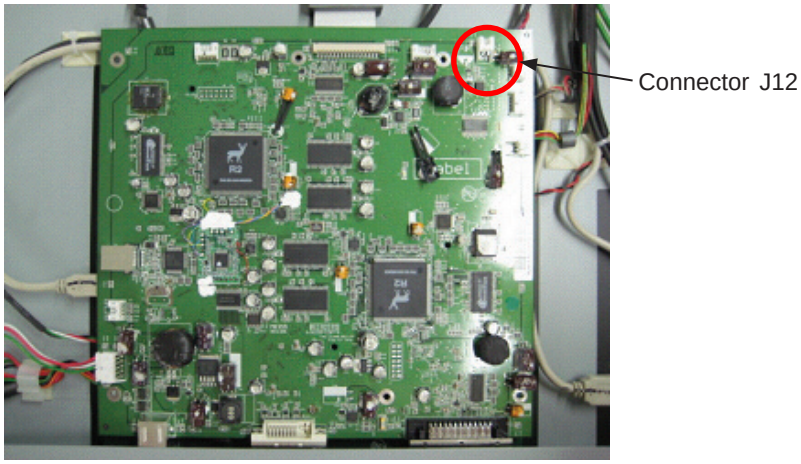


Figure 3.1.2.2.2 Main PCB (MB355)

3.1.2.3 Flatbet Lamp Does Not Turn On

Table 3.3

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and CCD PCB	Main PCB MB355	Visual check. See figure 3.1.2.3.1.	Connect the connector J8.	None
Inverter power supply failure, or faulty main PCB or carriage module	Main PCB MB355, Carriage module	- Check for flatbed inverter power supply (+24V). In section 3.2, see the point 3 to check; or - Visual check for lamp turn-on. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	None

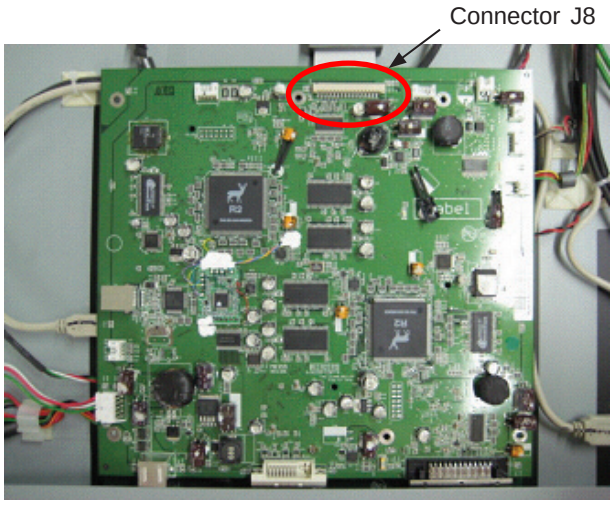


Figure 3.1.2.3.1 Main PCB (MB355)

3.1.2.4 ADF Lamp Does Not Turn On

Table 3.4

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and ADF	None	Visual check. See figure 3.1.2.4.1.	Connect the ADF connector J11 securely.	None
Inverter power supply failure or faulty main PCB	Main PCB MB355	Check for ADF inverter power supply (+24V) * In section 3.2, see the point 4 to check.	Replace the main PCB part No. 43775401 (ODA)/ 43775402 (AOS)/ 43775403 (OEL).	None
Faulty ADF scan module	ADF scan module	Visual check	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

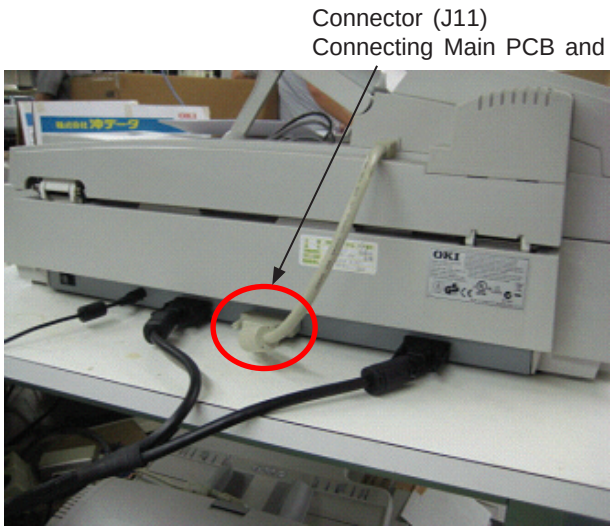
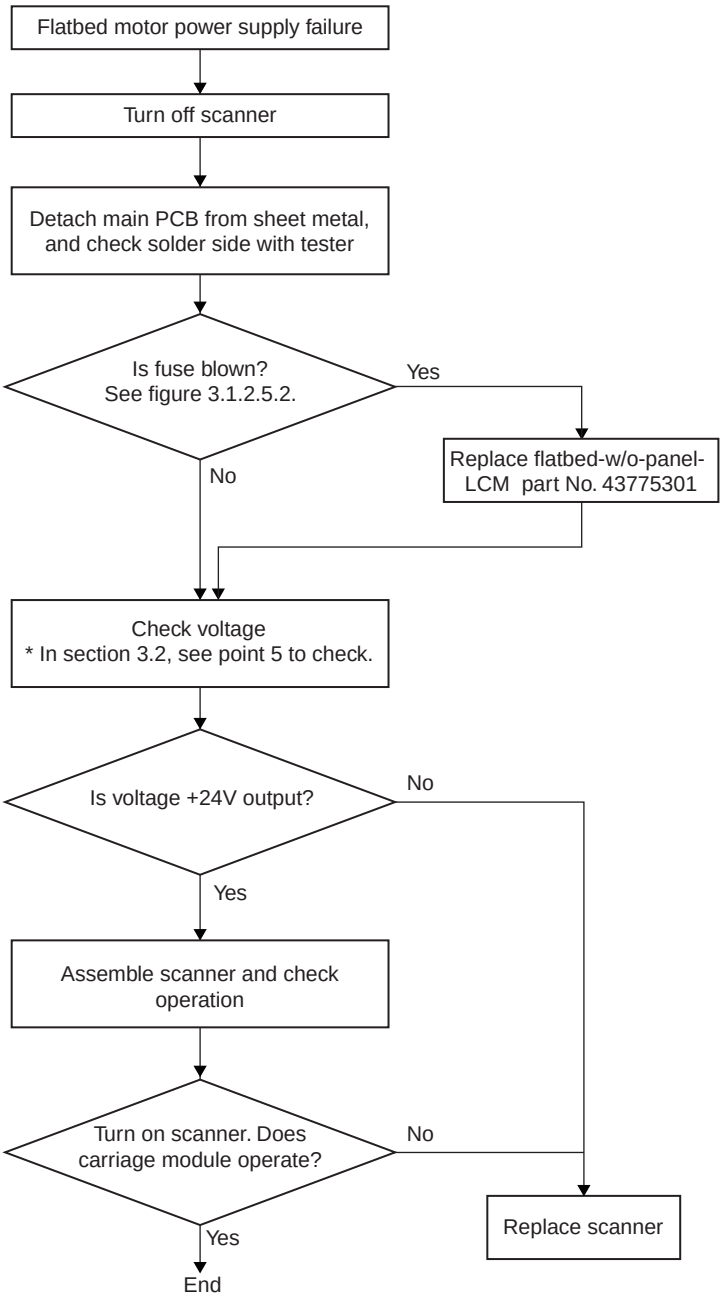


Figure 3.1.2.4.1

3.1.2.5 Carriage Module Does Not Operate

Table 3.5

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and CCD PCB	Main PCB MB355	Visual check. See figure 3.1.2.5.1.	Connect the connector J8.	None
Flatbed motor power supply failure	Main PCB MB355	Check based on flowchart shown below for flatbed motor power supply (+24V)	Follow the flowchart shown below to perform maintenance.	None
Faulty carriage module or main PCB	Flatbed scan module, Main PCB MB355	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	None



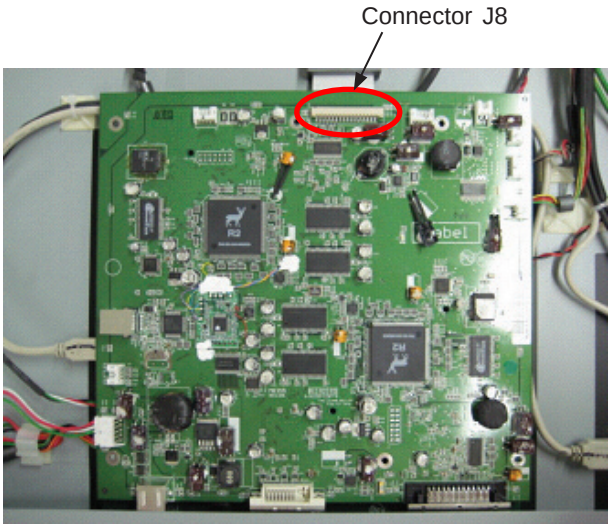


Figure 3.1.2.5.1 Main PCB (MB355)

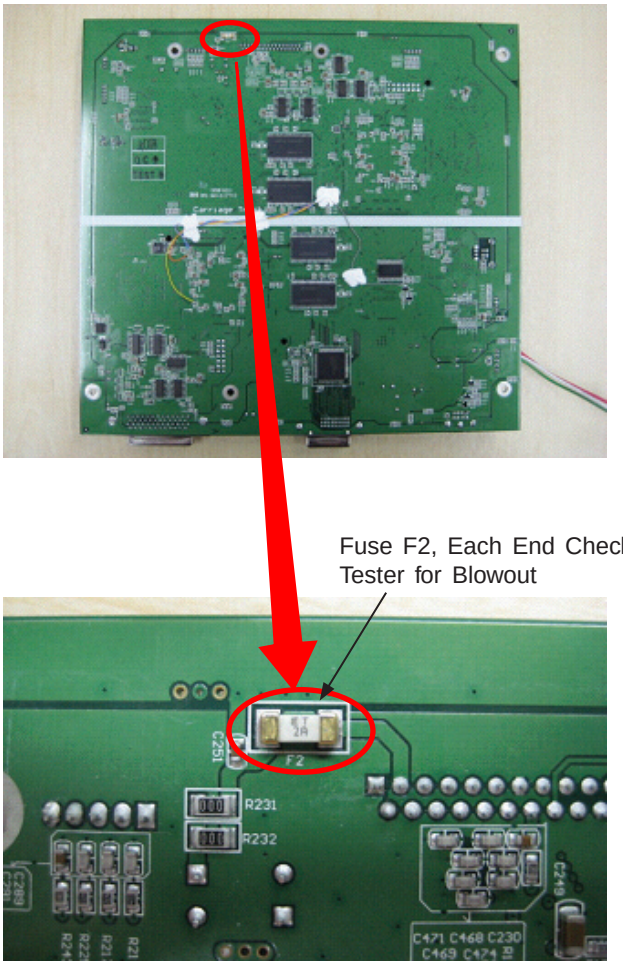
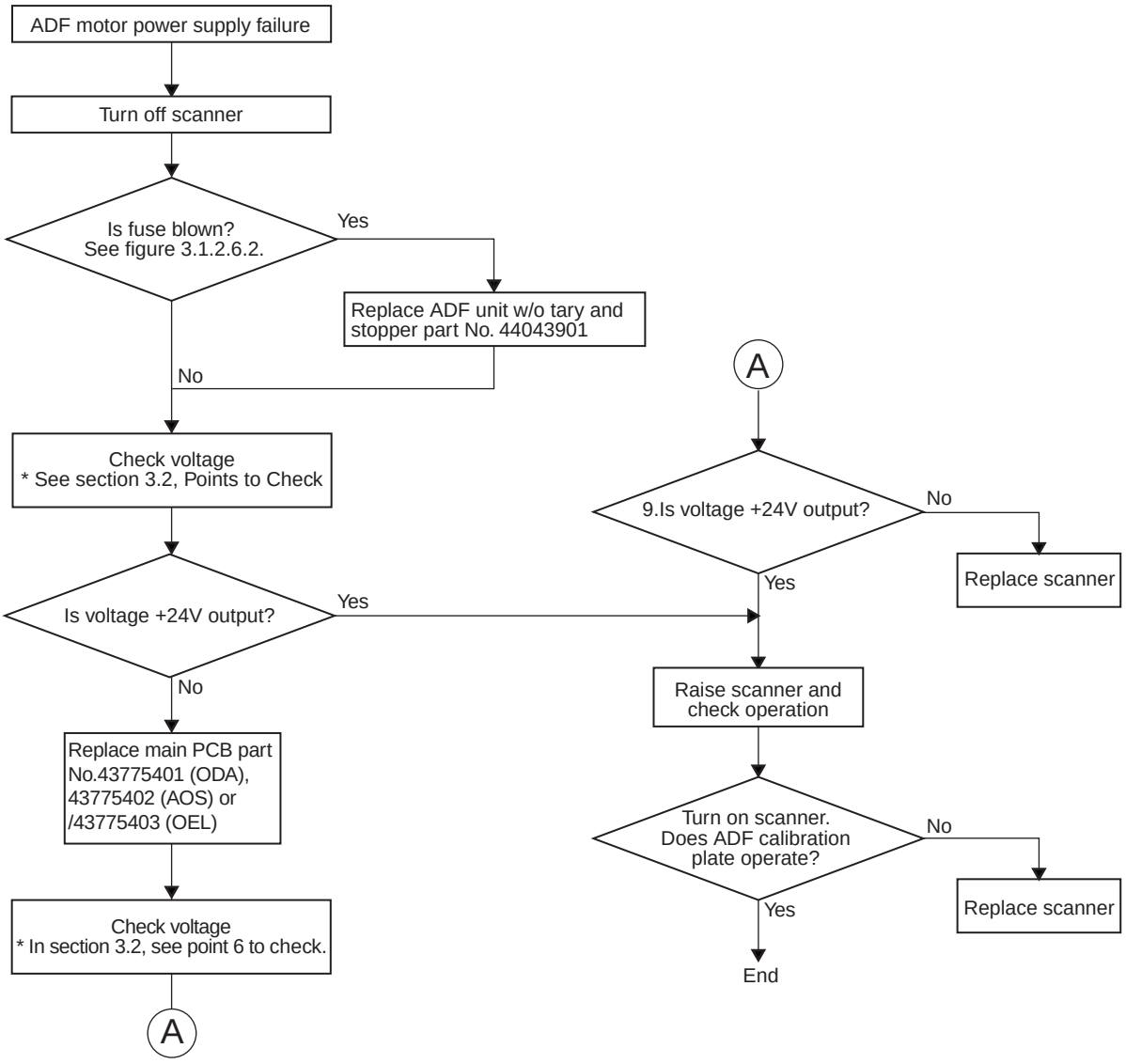


Figure 3.1.2.5.2 Main PCB (MB 355) Solder Side

3.1.2.6 ADF Calibration Plate Does Not Operate

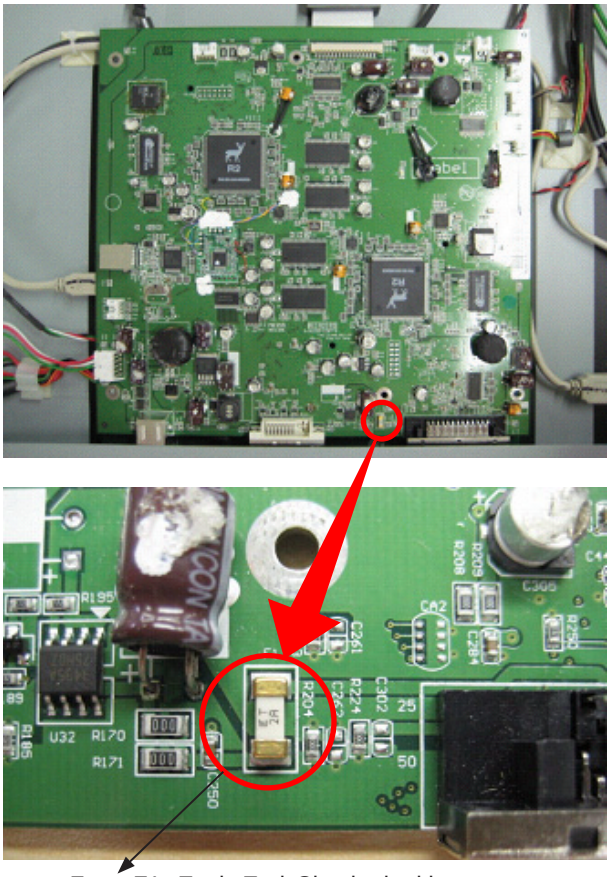
Table 3.6

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and ADF	None	Visual check. See figure 3.1.2.6.1.	Connect the ADF connector J11 securely.	None
Faulty ADF PCB ABA61	ADF PCB ABA61	Visual check	Replace the PCBA-ABA61 part No. 43774501.	None
Motor power supply failure	Main PCB MB355	Check based on flowchart shown below for ADF motor power supply (+24V)	Follow the flowchart shown below to perform maintenance.	None
Faulty ADF unit	ADF unit	Visual check	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None
Faulty main PCB	Main PCB MB355	Visual check	Replace the main PCB part No. 43775401 (ODA)/ 43775402 (AOS)/ 43775403 (OEL).	None



Connector (J11)
Connecting Main PCB and ADF

Figure 3.1.2.6.1



Fuse F1, Each End Checked with
Tester for Blowout

Figure 3.1.2.6.2 Main PCB (MB 355)

3.1.2.7 LCD Does Not Display Information Properly

Table 3.7

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between printer and LCD controller	LCD controller PCB MB356	Visual check. See figure 3.1.2.7.1.	Connect the VGA connector.	None
Power connection between LCD controller PCB and main PCB	LCD controller PCB (MB356), Main PCB (MB355)	Visual check. See figure 3.1.2.7.2.	Connect the connectors J2 (MB356) and J13 (MB355).	None
Faulty main PCB	Main PCB MB355	Visual check	Replace the main PCB part No. 43775401 (ODA)/43775402 (AOS)/43775403 (OEL).	None
LCD ass'y failure	LCD ass'y	Visual check	Replace the LCD ass'y part No. 43775101.	None

Figure 3.1.2.7.1

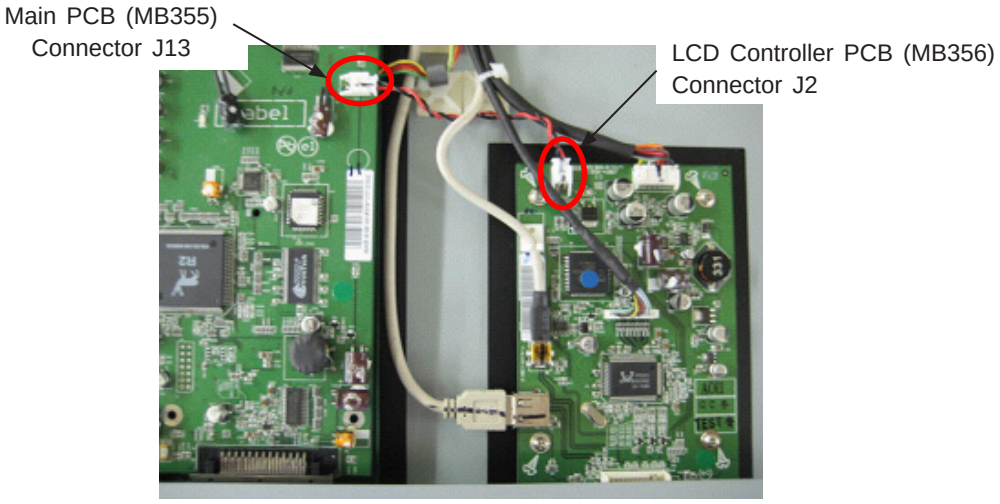


Figure 3.1.2.7.2

3.1.2.8 LCD Touch Panel Does Not Operate Properly

Table 3.8

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between printer and LCD controller	LCD controller PCB MB356	Visual check. See figure 3.1.2.8.1.	Connect the VGA connector.	None
LCD ass'y failure	LCD ass'y	Visual check	Replace the LCD ass'y part No. 43775101.	None

Figure 3.1.2.8.1

3.1.2.9 Reduced LCD Display and Touch Panel Key Position Accuracy

Table 3.9

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Insufficient touch panel adjustment	LCD module	Touch panel touching	Adjust the touch panel. See section 5.2.3.	None
LCD ass'y failure	LCD ass'y	Touch panel touching	Replace the LCD ass'y part No. 43775101.	None

3.1.2.10 No Buzzer Sounds During Panel Key Operation

Table 3.10

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor cable connection between operation control PCB and main PCB	Operation control PCB (UI74), Main PCB (MB355)	Visual check. See figures 3.1.2.10.1 and 3.1.2.10.2.	Connect the connectors J2 (UI74) and J12 (MB355).	None
Disconnection between operation control PCB and main PCB, or PCB failure.	Flatbed unit, Main PCB (MB355)	Visual check. See figures 3.1.2.10.1 and 3.1.2.10.2.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	
PCB failure. See figures 3.1.2.11.1.	Operation control PCB (UI74)	Check for operator panel power supply (+24V) * In section 3.2, see the point 2 to check.	Replace the right panel part No. 43774901 (OEL)/ 43774902 (AOS)/ 43774903 (ODA).	

Figure 3.1.2.10.1 Operation control PCB (U174)

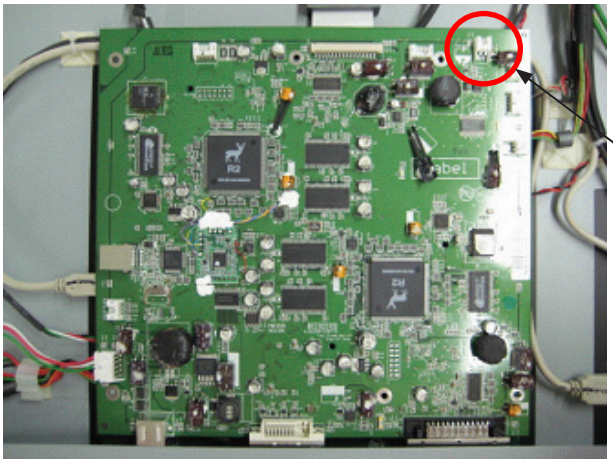


Figure 3.1.2.10.2 Main PCB (MB 355)

3.1.2.11 LCD Tilt Function Does Not Work Properly

Table 3.11

Possible Cause	Units Involved	Check Method	Maintenance	Remark
LCD ass'y failure	LCD ass'y	LCD up-and-down movement check	Replace the LCD ass'y part No. 43775101.	None
Cover spacer panel ass'y failure	Cover spacer panel ass'y	LCD up-and-down movement check	Replace the cover spacer panel ass'y part No. 43775201.	

3.1.2.12 Scanner Does Not Perform Scanning

Table 3.12

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between Main PCB and CCD PCB	Main PCB MB355	Visual check. See figure 3.1.2.12.1.	Connect the connector J8.	None
Faulty carriage module or main PCB	Flatbed scan module, main PCB MB355	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB)	None

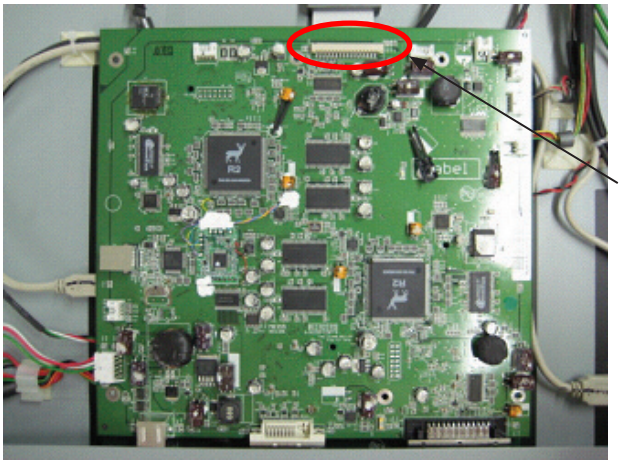


Figure 3.1.2.12.1 Main PCB (MB355)

3.1.2.13 No Output Images

Table 3.13

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and CCD PCB	Main PCB MB355	Visual check. See figure 3.1.2.13.1.	Connect the connectors J8 (flatbed CCD) and J11 (ADF CCD).	None
Faulty main PCB	Main PCB MB355	Check for flatbed inverter power supply (+24V) * In section 3.2, see the point 3 to check.	Replace the main PCB part No. 43775401 (ODA)/ 43775402 (AOS)/ 43775403 (OEL).	Flatbed scanning
		Check for ADF inverter power supply (+24V) * In section 3.2, see the point 4 to check.		ADF face-down scanning only
Faulty flatbed lamp, inverter or CCD PCB	Lamp, Inverter, CCD PCB	Visual check	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB)	Flatbed scanning
Faulty ADF lamp, inverter or CCD PCB	Lamp, Inverter, CCD PCB	Visual check	Replace the ADF unit w/o tray and stopper, part No. 44043901.	ADF face-down scanning only
ADF calibration plate malfunction	ADF unit	Visual check. See figure 3.1.1.1.4.		

Note: Scan documents duplex on the ADF to produce ADF scanned images to check (because the ADF CCD is used only for duplex scanning).

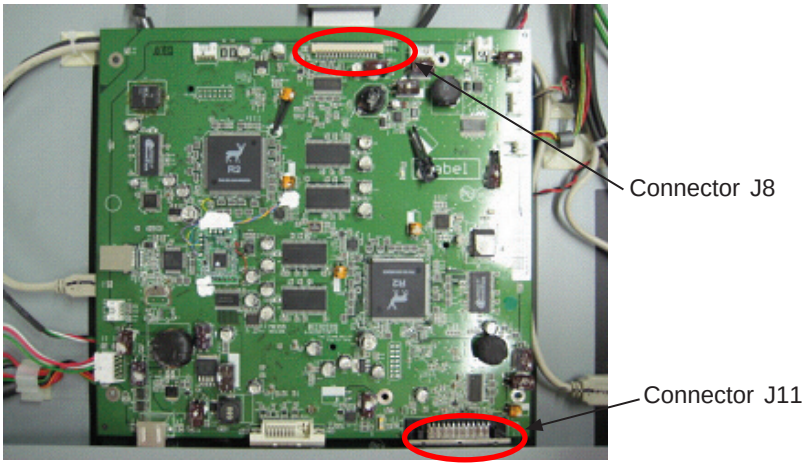


Figure 3.1.2.13.1 Main PCB (MB355)

3.1.2.14 Large Jitter (Flatbed)

Table 3.14

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and CCD PCB	Main PCB MB355	Visual check. See figure 3.1.2.14.1.	Connect the connector J8.	None
Faulty carriage module	Motor	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	None

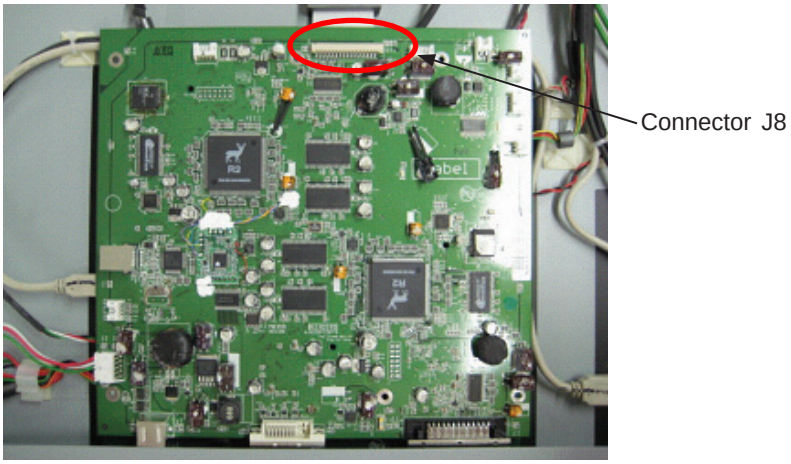


Figure 3.1.2.14.1 Main PCB (MB355)

3.1.2.15 Deviated Scan Position (Flatbed)

Table 3.15

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Improper loading of flatbed	Operation error	Check for proper loading of flatbed	Instruct proper loading of the flatbed to the user.	None
Faulty motor	Motor	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	None

3.1.2.16 Unclear Image

Table 3.16

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Too dark flatbed lamp	Lamp	Visual check. See figure 3.1.1.1.2.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	Flatbed scanning
Too dark ADF lamp	Lamp	Visual check. See figure 3.1.1.1.2.	Replace the ADF unit w/o tray and stopper, part No. 44043901.	ADF face-down scanning only
Dirt on flatbed glass	Flatbed glass	Visual check. See figure 3.1.1.1.2.	Clean the flatbed glass with isopropyl alcohol.	Flatbed scanning and ADF face-up scanning
Dirt on flatbed calibration plate. See figure 3.1.1.1.3.	Flatbed unit	none	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB).	Flatbed scanning and ADF face-up scanning
Dirt on ADF calibration plate. See figure 3.1.1.1.4.	ADF unit	none	Replace the ADF unit w/o tray and stopper, part No. 44043901.	ADF face-down scanning only

Note: Scan documents duplex on the ADF to produce ADF scanned images to check (because the ADF CCD is used only for duplex scanning).

3.1.2.17 Abnormal Noise (Flatbed)

Table 3.17

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Home position sensor error or faulty main PCB	Flatbed unit, Main PCB MB355	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB)	None
Carriage module malfunction or faulty main PCB	Carriage module, Main PCB MB355	Visual check for carriage operation. See figure 3.1.1.1.3.	Replace the flatbed-w/o-panel-LCM part No.. 43775301 (w/ main PCB)	None
Dirt on rod and rail, or faulty main PCB	Main PCB MB355	Visual check. See figures 3.1.2.17.1 and 3.1.2.17.2.	Replace the flatbed-w/o-panel-LCM part No. 43775301 (w/ main PCB)	None

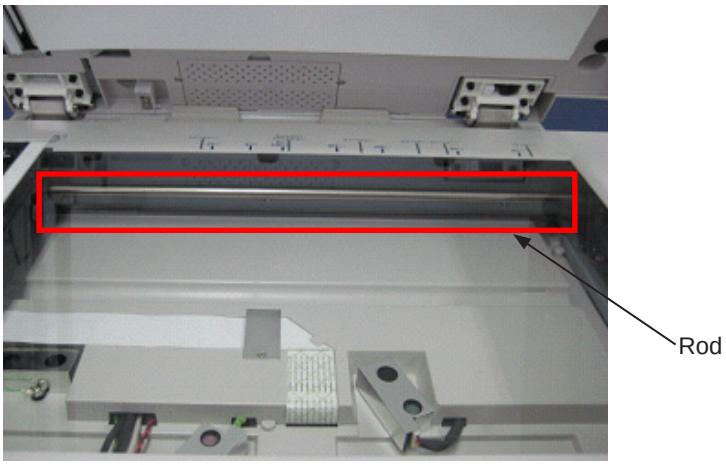


Figure 3.1.2.17.1

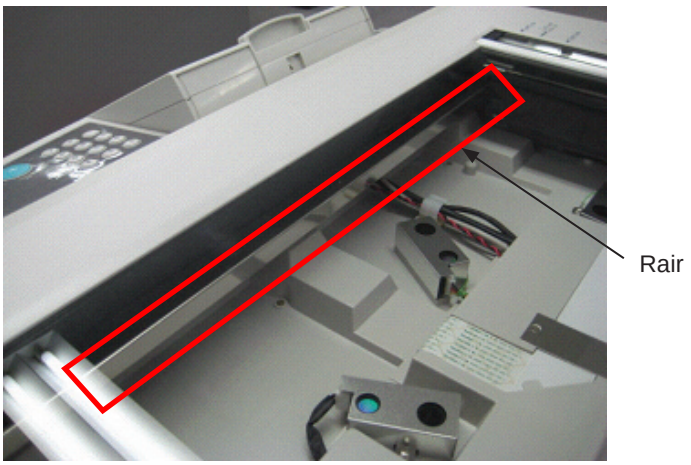


Figure 3.1.2.17.2

3.1.2.18 Frequent Paper Jam

Table 3.18

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Improper loading of ADF	Operation error	Check for proper loading of ADF	Instruct proper loading of the ADF to the user.	None
Improper paper	Operation error	Check for use of specified paper	None	None
Poor connection between main PCB and ADF	None	Visual check. See figure 3.1.2.18.1.	Connect the ADF connector J11 securely.	None
Defective pad assembly	Pad assembly	Check for wear of pad. See figure 3.1.2.18.2.	Replace the pad assembly part No. 43774401.	See section 6.2.1.3 for replacing the pad.
		Check for deformation of plate.See figure 3.1.2.18.2.		
		Check for proper insertion of pad assembly clip. See figure 3.1.2.18.3. and 3.1.2.18.4		
Faulty ADF unit	ADF unit	Replace the ADF unit.	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

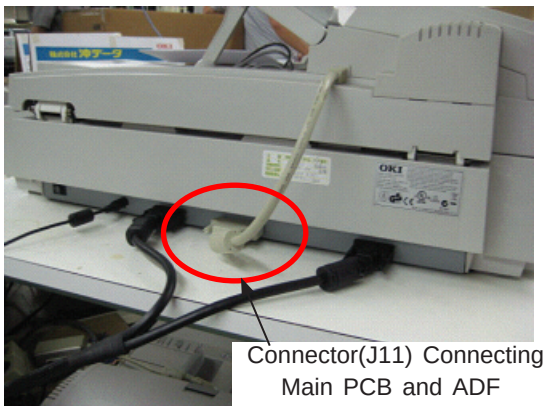


Figure 3.1.2.18.1

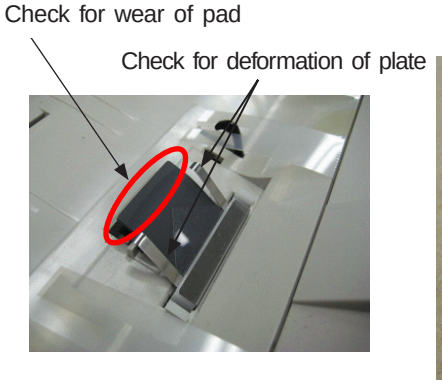


Figure 3.1.2.18.2

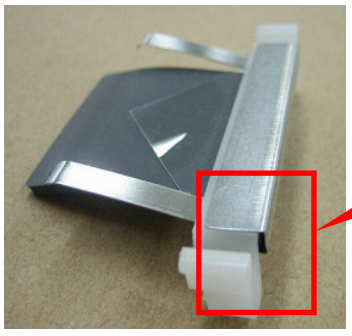


Figure 3.1.2.18.3

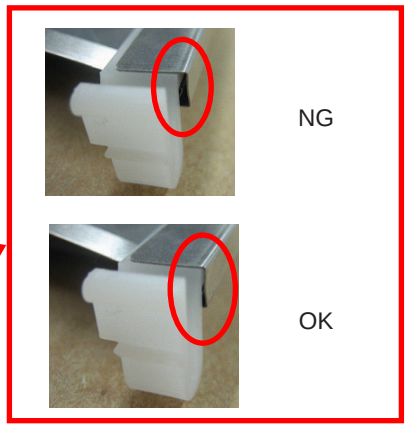


Figure 3.1.2.18.4

3.1.2.19 Frequent Multiple Feed or Paper Skew

Table 3.19

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Improper loading of ADF	Operation error	Check for proper loading of ADF	Instruct proper loading of the ADF.	None
Improper paper	Operation error	Check for use of specified paper	None	None
Defective pad assembly	Pad assembly	Check for wear of pad. See figure 3.1.2.19.1.	Replace the pad assembly part No. 43774401.	See section 6.2.1.3 for replacing the pad.
		Check for deformation of plate.See figure 3.1.2.19.1.		
		Check for complete insertion of pad assembly clip. See figure 3.1.2.19.2. and 3.1.2.19.3		
Faulty ADF unit	ADF unit	Replace the ADF unit.	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

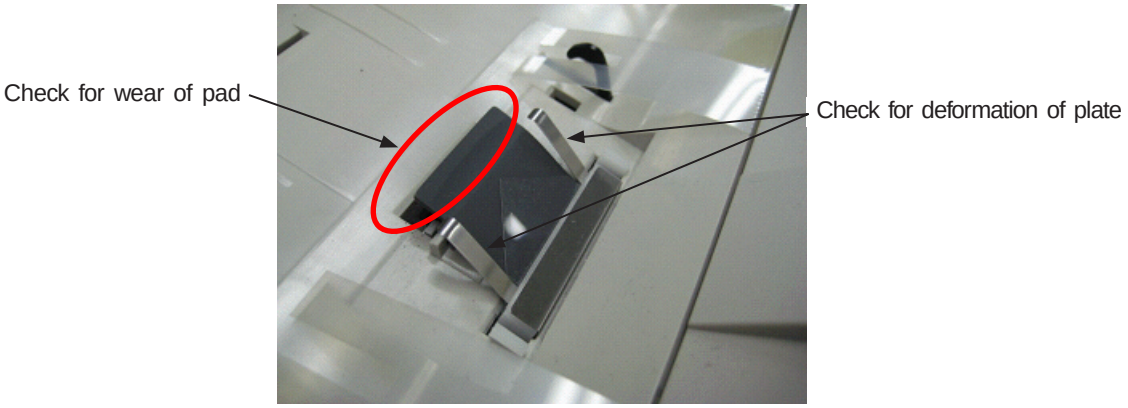


Figure 3.1.2.19.1

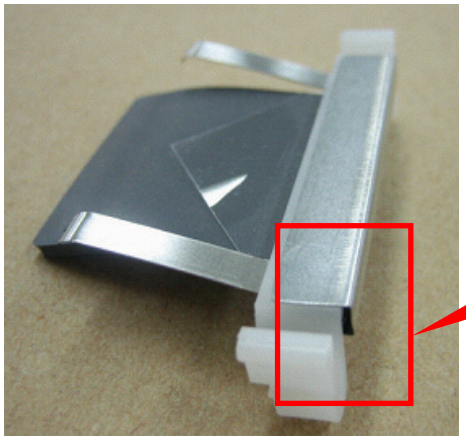


Figure 3.1.2.19.2

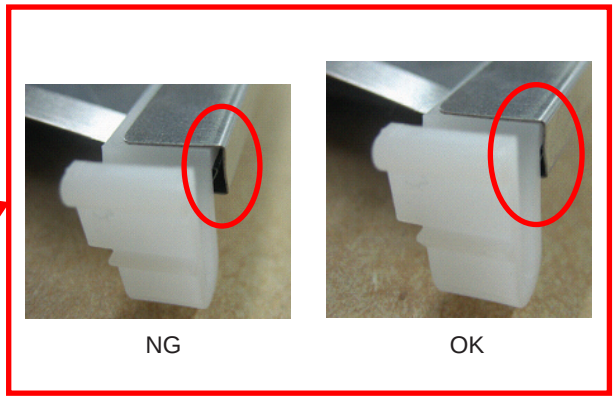


Figure 3.1.2.19.3

3.1.2.20 Large Jitter (ADF)

Table 3.20

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and ADF	None	Visual check. See figure 3.1.2.20.1.	Connect the ADF connector J11 securely.	None
Faulty motor	Motor	None	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

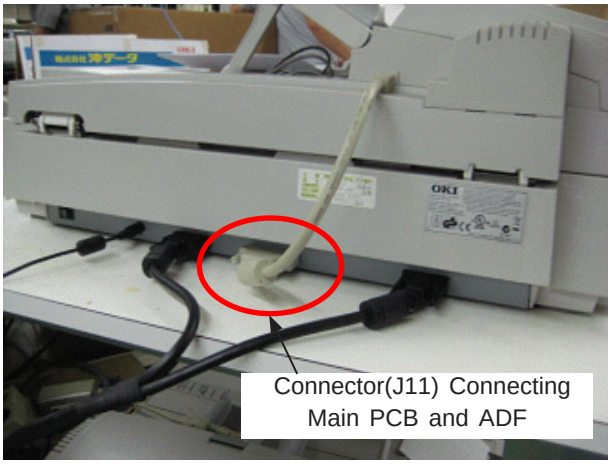


Figure 3.1.2.20.1

3.1.2.21 Deviated Scan Position (ADF)

Table 3.21

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Poor connection between main PCB and ADF	None	Visual check. See figure 3.1.2.21.1.	Connect the ADF connector J11 securely.	None
Faulty ADF unit	None	None	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

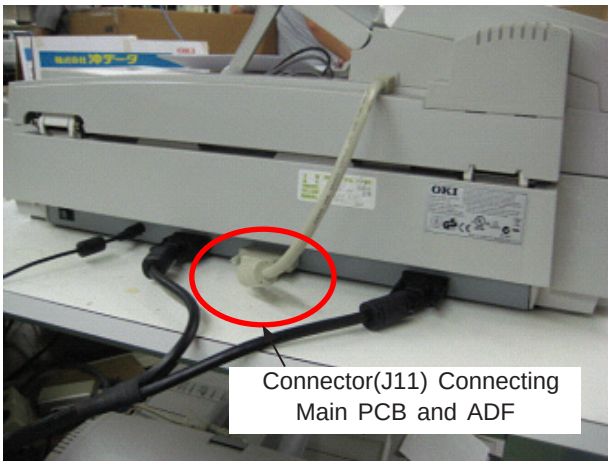


Figure 3.1.2.21.1

3.1.2.22 Abnormal Noise (ADF)

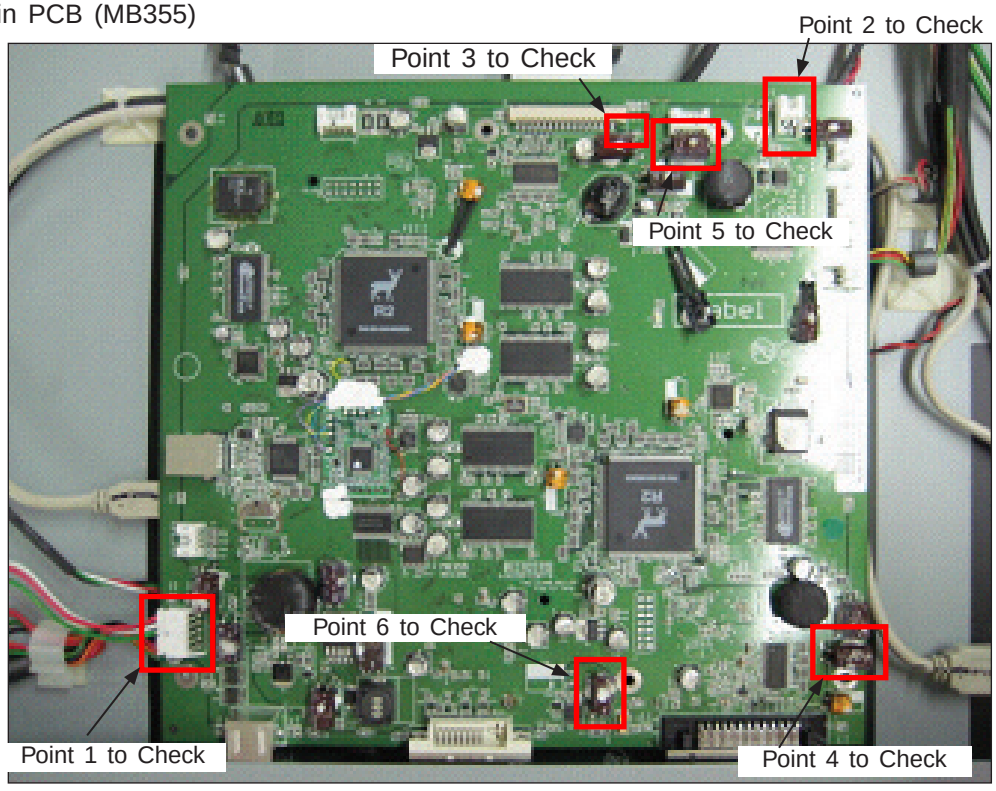
Table 3.22

Possible Cause	Units Involved	Check Method	Maintenance	Remark
Improper paper	Operation error	Check for use of specified paper	Instruct use of specified paper.	None
Faulty ADF unit	ADF unit	ADF unit replacement	Replace the ADF unit w/o tray and stopper, part No. 44043901.	None

3.2 Points to Check

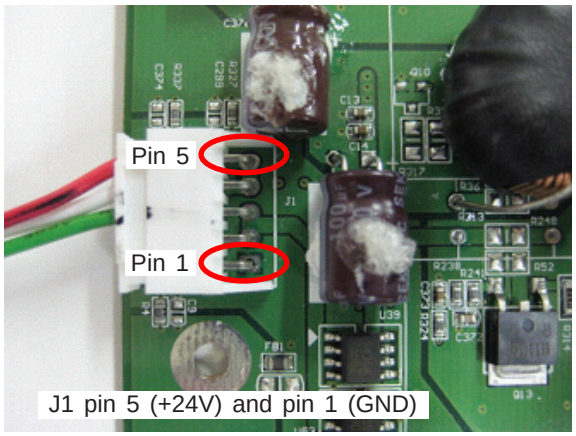
Point to Check	Units Involved	Check Method
Point 1 to Check: Power supply output +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for J1 pin 5 (+24V) and J1 pin 1 (GND). * See the figure below.
Point 2 to Check: Operator panel power +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for J12 pin 1 (+24V) and J12 pin 2 (GND). * See the figure below.
Point 3 to Check: Flatbed inverter power +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for C285 pin 1 (+24V) and C285 pin 2 (GND). * See the figure below.
Point 4 to Check: ADF inverter power +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for C367 pin 1 (+24V) and C367 pin 2 (GND). * See the figure below.
Point 5 to Check: Flatbed motor power +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for C295 pin 1 (+24V) and C295 pin 2 (GND). * See the figure below.
Point 6 to Check: ADF motor power +24V	Main PCB MB355	Connect the main PCB to its power supply and, with a tester, check the point shown below for C242 pin 1 (+24V) and C242 pin 2 (GND). * See the figure below.

Main PCB (MB355)

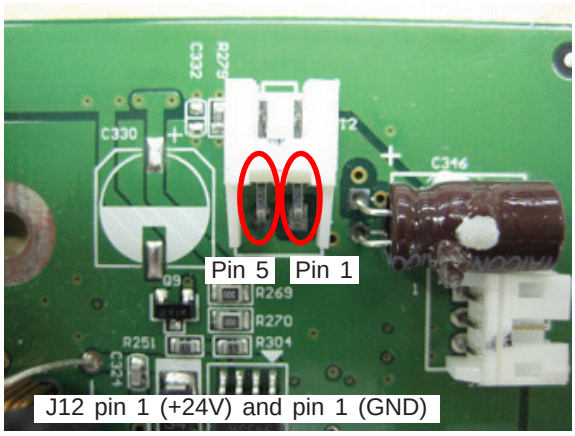


The following shows a magnified view of each of the points:

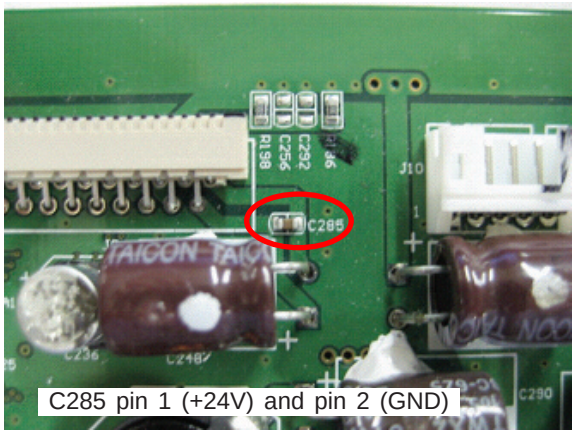
Point 1 to Check



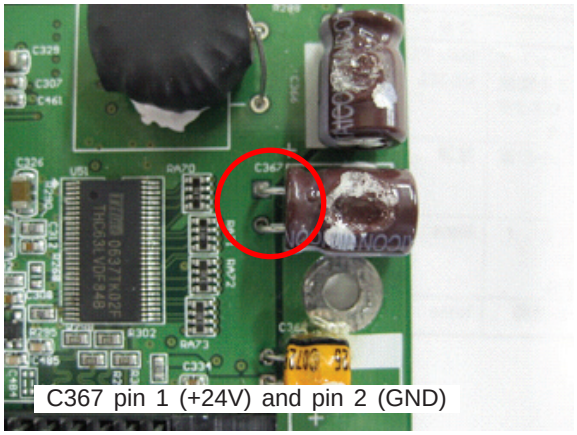
Point 2 to Check



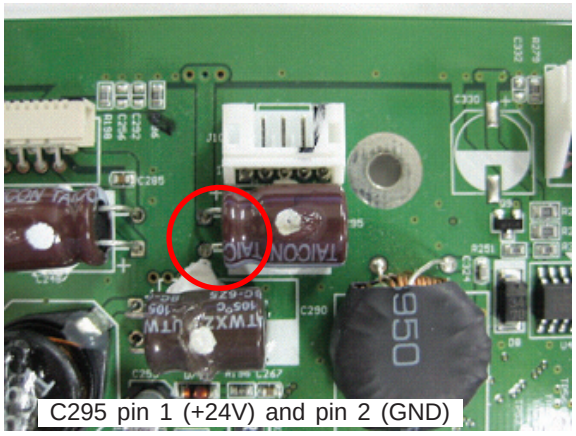
Point 3 to Check



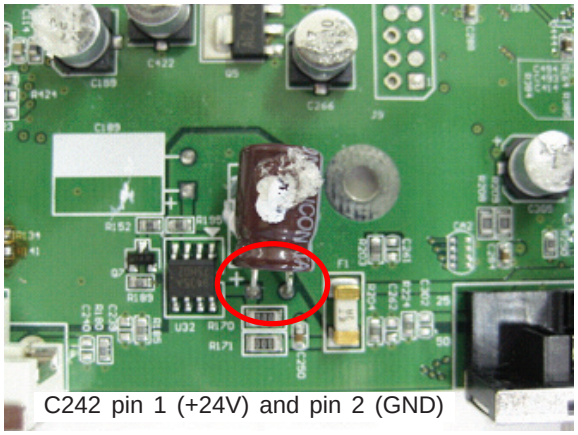
Point 4 to Check



Point 5 to Check



Point 6 to Check



4. MAINTENANCE

This chapter describes the cleaning, maintenance and adjustment procedures required for a C9850MFP scanner to operate properly.

Perform problem-preventive maintenance at least once every six months or before the scanner scans 60,000 sheets.

4.1 Cleaning

4.1.1 Cover and Glass

Wipe the document cover and glass with a soft cloth. Use a neutral detergent or alcohol when they are badly dirty. Be sure to wipe them well so as not to leave detergent on their surfaces.

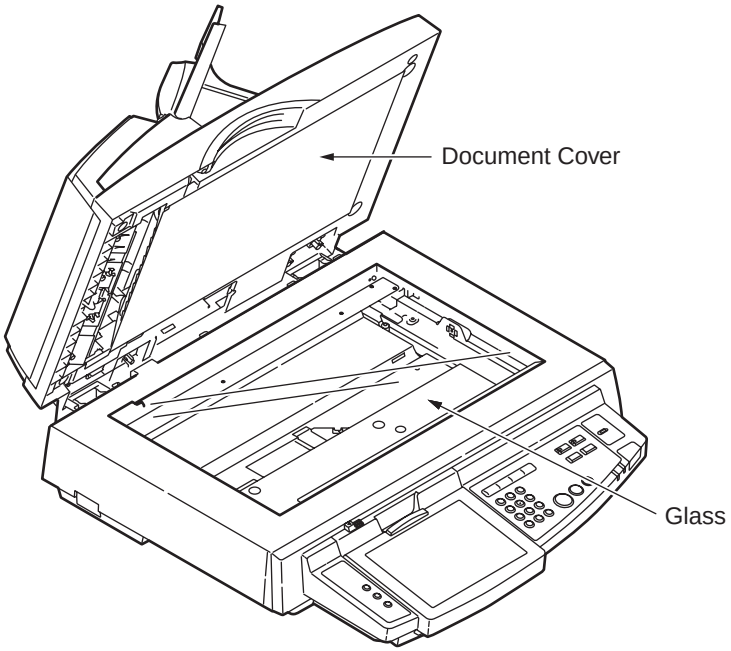


Figure 4-1 Cleaning Areas

4.2 Replacement of Spare Parts

This section describes the procedures for replacing the spare parts of each C9850MFP scanner. The necessary adjustments on some of the spare parts are described in chapter 6.

Note: See section 1.1 for the spare parts.

4.2.1 Notes on Replacement

(1) Clean the place where a C9850MFP scanner is disassembled or assembled.

(2) Turn off each C9850MFP scanner of which spare part to replace and, before disassembling or assembling the scanner, unplug its AC power cord from its AC outlet.

(3) Follow the procedures for disassembling and assembling each C9850MFP scanner. Never loosen the screws for the scanner's parts that must not be disassembled.

(4) Retain disassembled parts in a clean place to prevent them from suffering damage.

(5) After replacing a spare part, check appropriate electrical connections, and the spare part for proper installation.

(6) To reassemble each C9850MFP scanner, reverse the order in which it was disassembled.

4.2.2 Replacement of ADF Snap-in Pad Module

By scanning about 100,000 pages, each C9850MFP scanner consumes its ADF snap-in module and may cause a document feed problem. In such a case, replace the ADF snap-in module with a new one using the procedure described below. To order an ADF snap-in module, contact the dealer of the scanner. Refer to 6.2.1.3 for replacing the module.

*1: The attachments shipped with each C9850MFP scanner include one ADF snap-in pad module (43774401).

5. ADJUSTMENTS

5.1 Scanners

The image gradation, scan start position and skew of C9850MFP scanners are factory configured before they are shipped. The adjustment values for the scanners are stored on their main boards. The adjustment values vary depending on the scanning head and scanner mechanism of the scanners and, when any of the following components of the scanners are replaced, the scanners require readjustments.

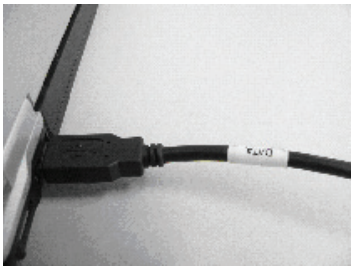
Table 5-1 Maintenance Methods

No.	Part Replaced	Maintenance Method
1	ADF Unit	5.3.1 Flow Test for Deskew 5.3.2 Learning
2	PCBA for ADF	5.3.1 Flow Test for Deskew 5.3.2 Learning
3	Assy Tray	5.3.1 Flow Test for Deskew
4	Flatbed Unit	5.3.1 Flow Test for Deskew 5.3.2 Learning
5	Assy Main Board	5.3.2 Learning
6	Assy Hinge Heavy	5.3.1 Flow Test for Deskew 5.3.2 Learning
7	LCD Assy	5.3.3 Touch Panel Calibration

Each C9850MFP scanner to adjust should be connected to a PC (see the following diagram).

CONTROL Connector
Connected to Scanner

DVI-USB Cable

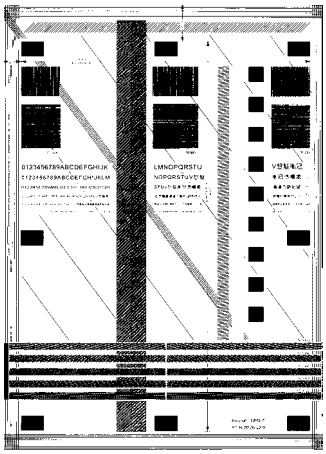


Only DATA USB Cable
Connected to PC

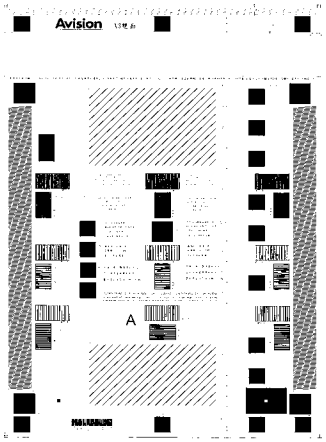
Adjustment of a C9850MFP scanner requires the following tools:

Table 5-1 Maintenance Tools

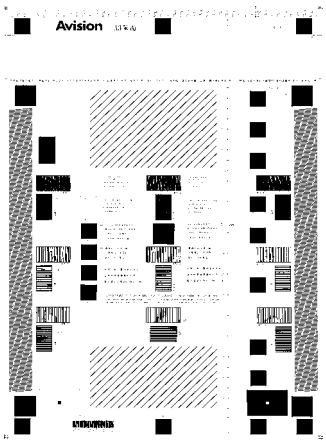
No.	Parts No.	Maintenance chart	Quantity	Avision's Parts No.
1	43798701	CHART SET FOR Deskew-PX723 Scanner	1	255-1182-0-SP
2	43945801	CHART FOR ADF	2	255-1185-0-SP
3	43945901	CHART FOR FB	1	255-1184-0-SP
4	43946001	DVI-USB Cable	1	104-6039-19-SP
5	43951301	Jig left	1	051-4369-0-SP
6	44000801	Jig rear	1	051-4370-0-SP
7	44292301	Scanner driver	1	-
8	44299101	Flow Test tool	1	-
9	44299001	Learning Tool	1	-
10	44298901	Touch kit	1	-
11		PC (OS:Windows XP)	1	-



No.1



No.2

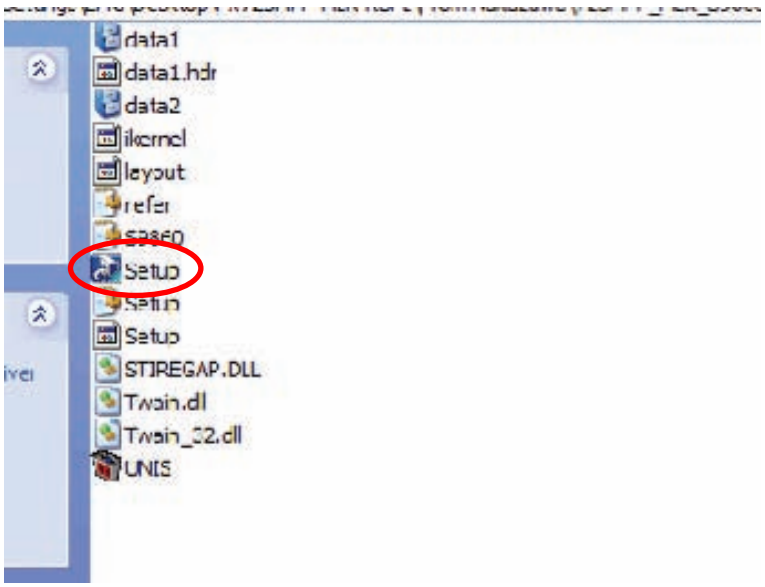


No.3

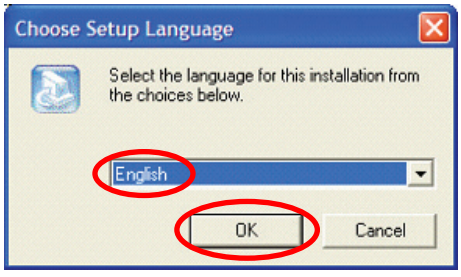
5.2 Scanner Driver Installation

Install on a PC a scanner driver for a C9850MFP scanner to adjust:

Double click Setup.exe in the scanner driver folder on the PC.

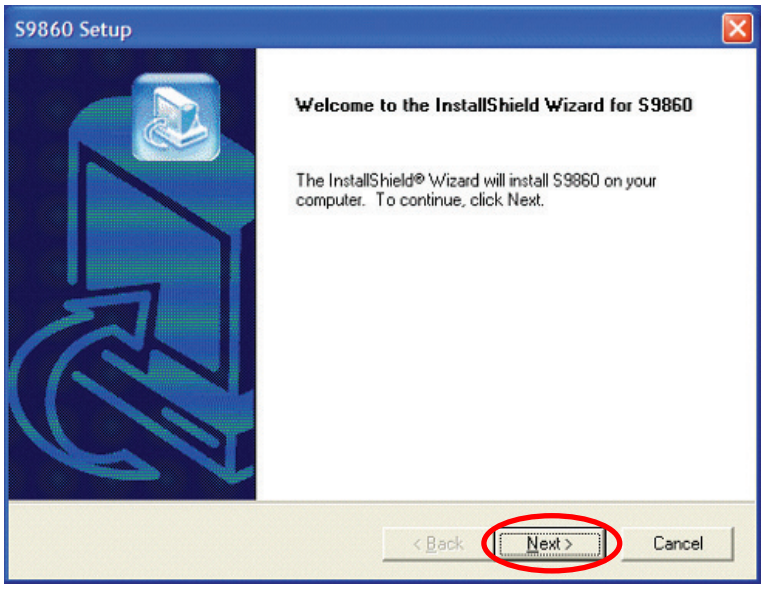


Select English through Choose Setup Language and click the OK button.

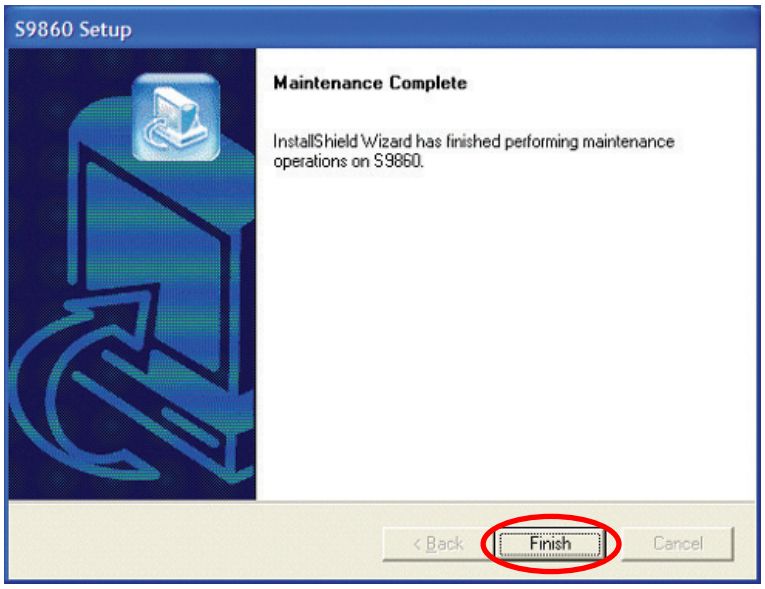


The following message shown below appears.

Press the Next button, and installation of the driver starts.



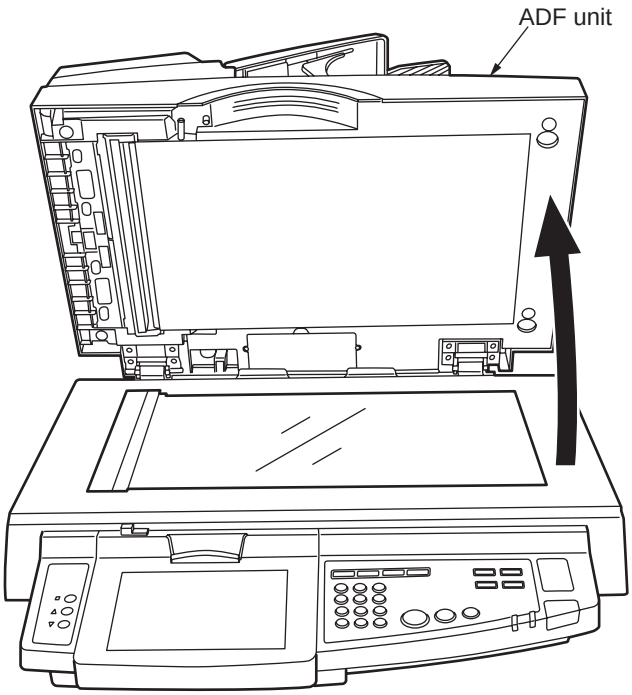
When the installation is complete, the message shown below appears. Click Finish.



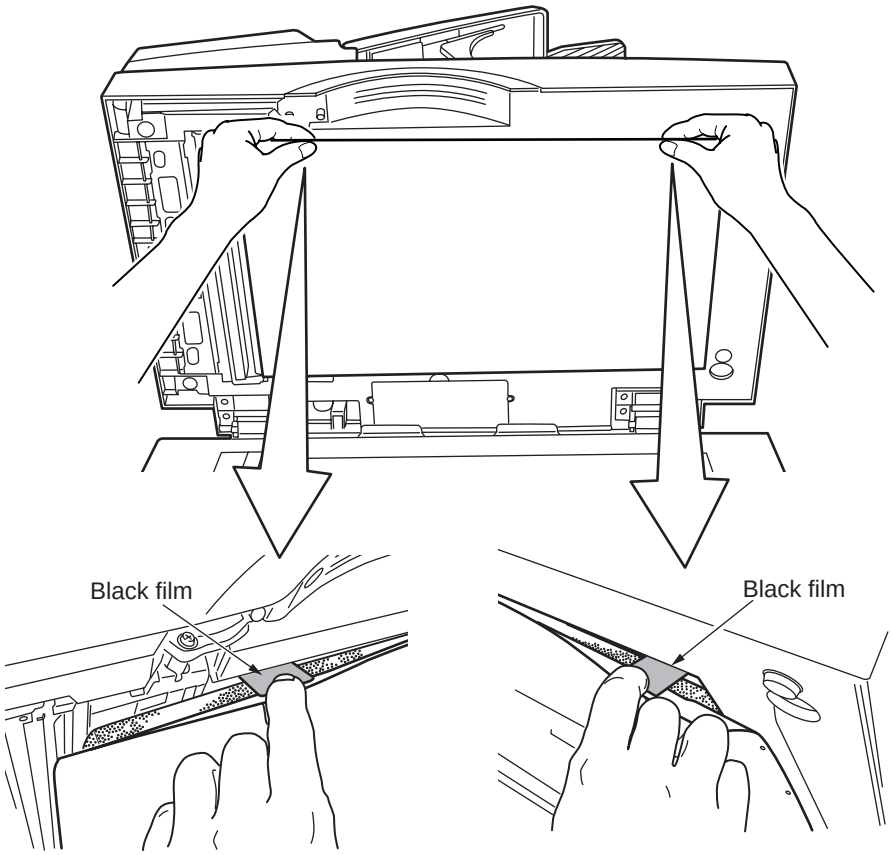
5.3 Adjustment Methods

5.3.1 Flow Test for deskew

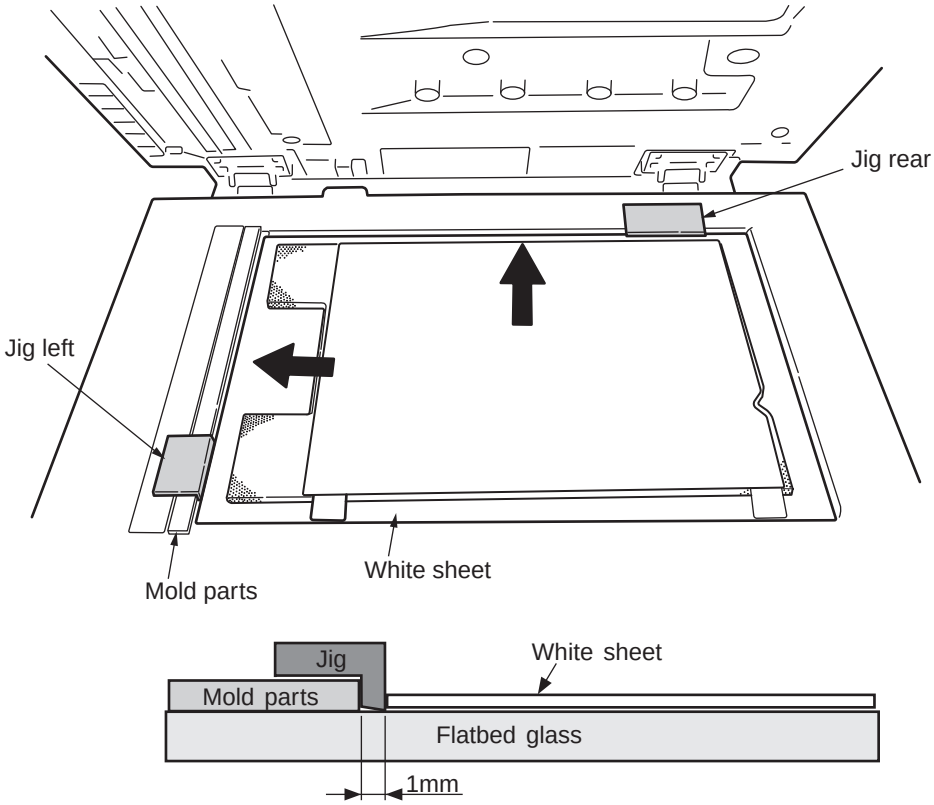
(1) Raise the ADF unit of a C9850MFP scanner to adjust.



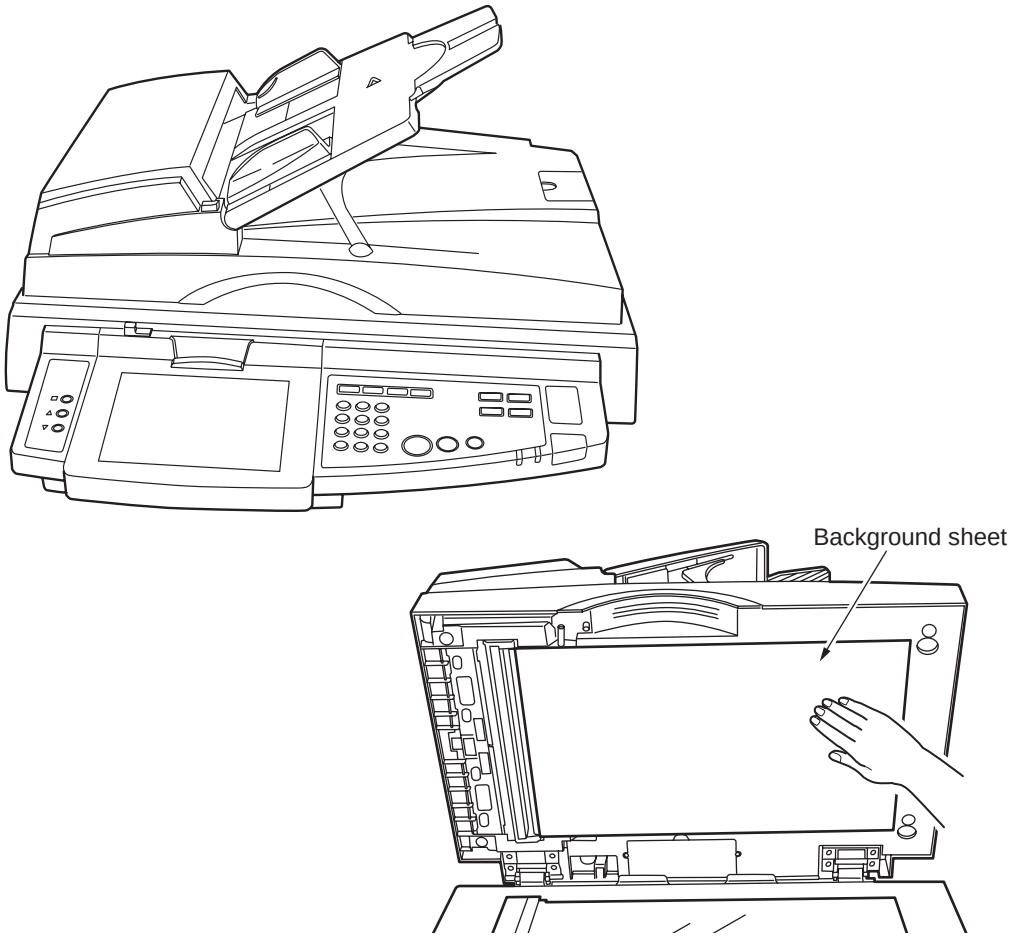
(2) Holding the black film by the tabs, remove the background sheet.
* Do this step carefully so as not to bend the white sheet.
* Do not touch the parts other than the tabs.



(3) Put the two jigs on the flatbed glass, create 1-mm space between the white sheet and the mold part, and put the background sheet on them. Being careful not to allow the background sheet to move, remove the two jigs.

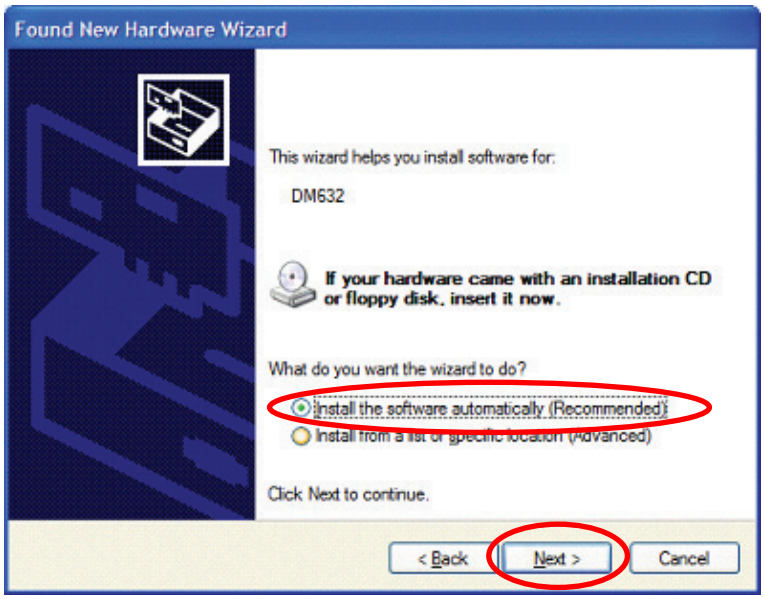


(4) Lay and raise the ADF unit and press the background sheet.

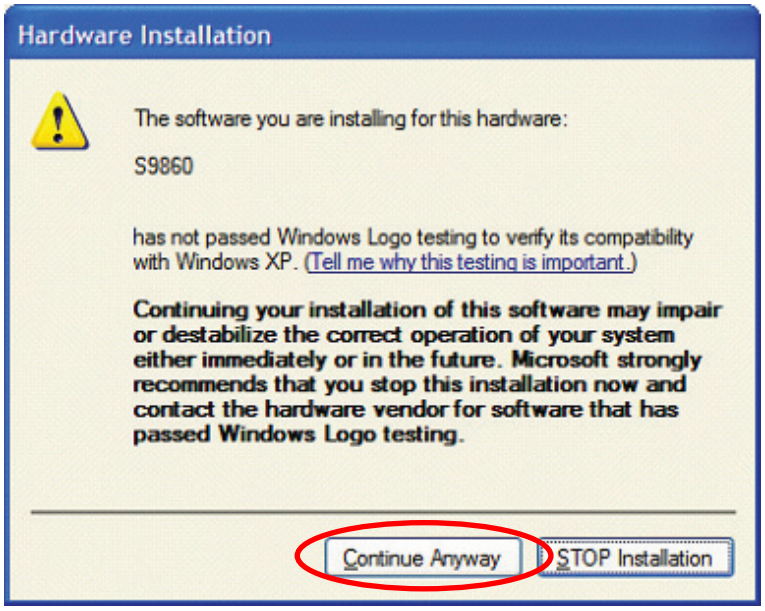


(5) Connect a PC to the scanner control port by using a DVI-USB cable. A hardware wizard starts only when the PC newly finds the scanner. The PC has not recognize the scanner till now. Select “No, not this time” and click Next.

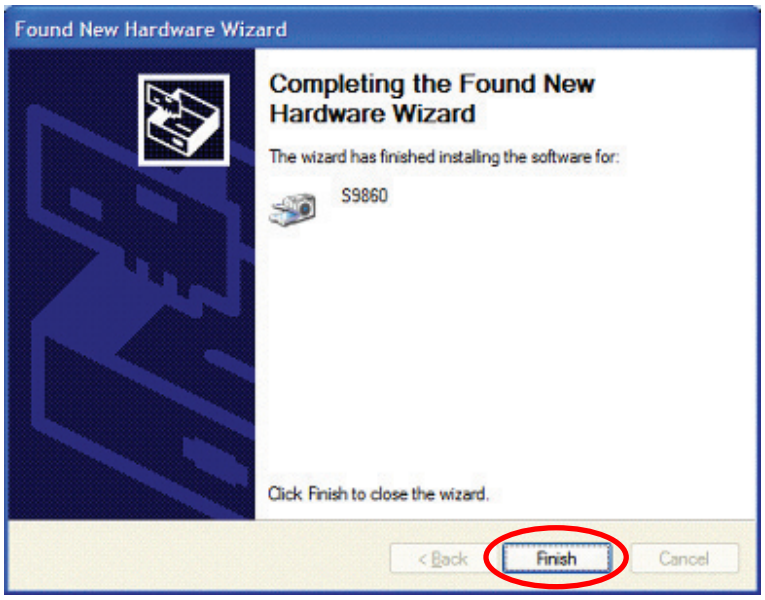
(6) The message shown below appears. Select “Install the software automatically” and click Next (configure a scanner driver for the scanner for the PC to recognize new hardware).



(7) A search for the scanner driver starts and the message shown below appears. Click Continue Anyway.

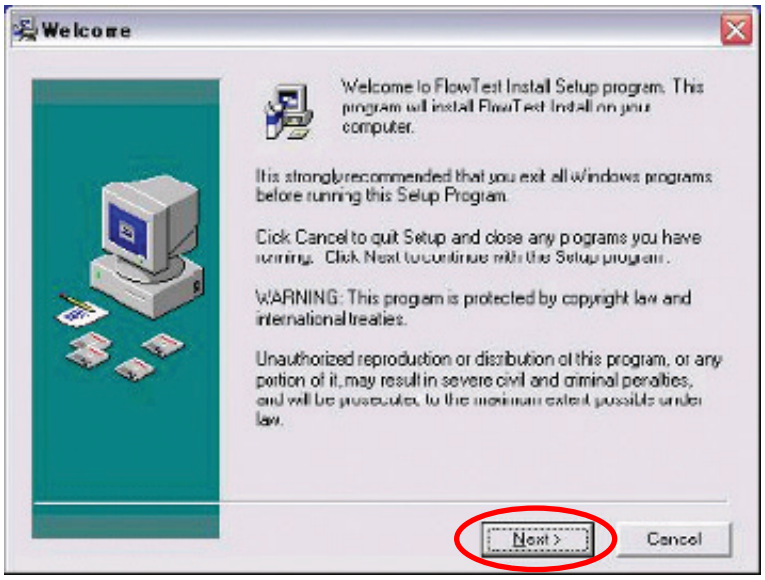


(8) The scanner driver has just been configured. Click Finish.

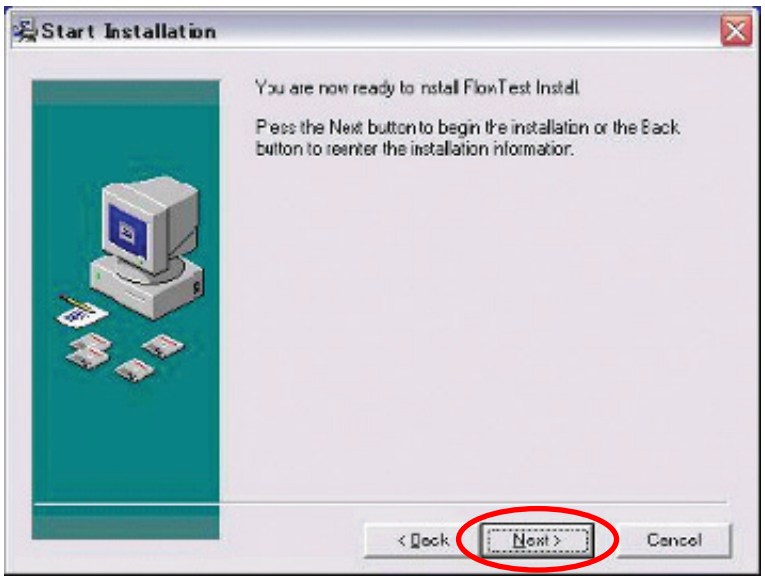


(9) Install the FlowTest tool on the PC:
Double click FlowTest.EXE.

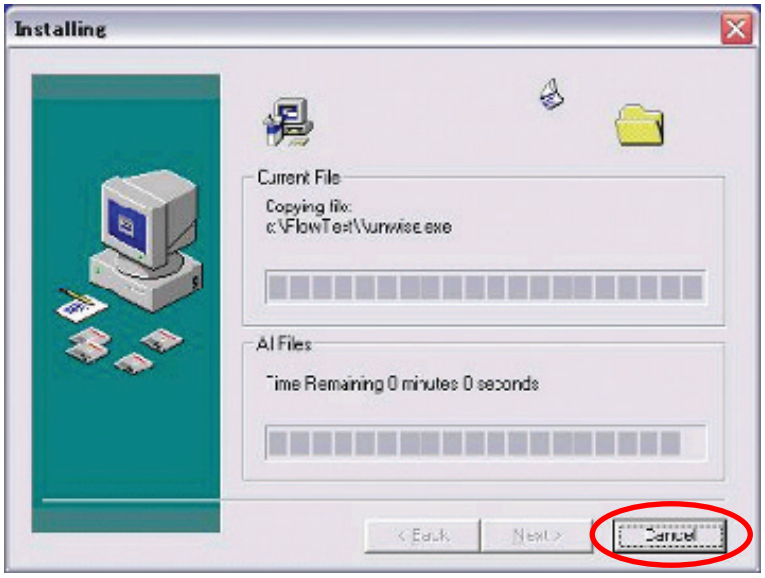
(10) The message shown below appears. Click Next.



(11) The message shown below appears. Click the Next button, and the installation of the tool starts.



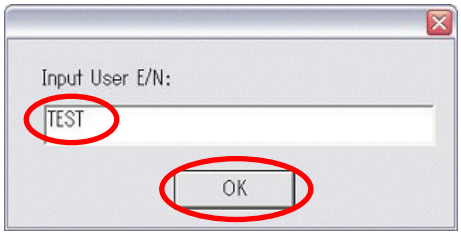
(12) The following installation window appears and, when the installation is complete, it automatically closes.



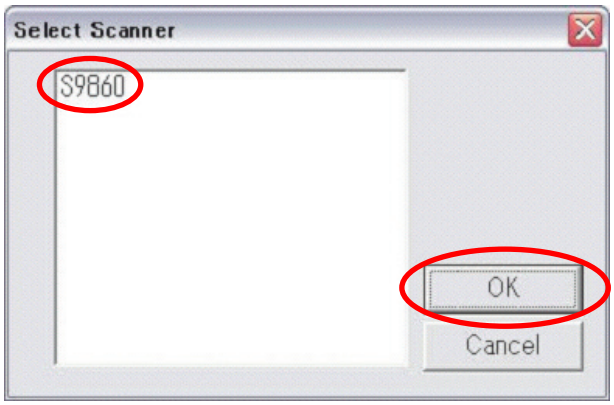
(13) The installation is complete. Be sure that the following FlowTest icon appears on the desktop.

(14) Start the FlowTest tool: Double-click the FlowTest icon.

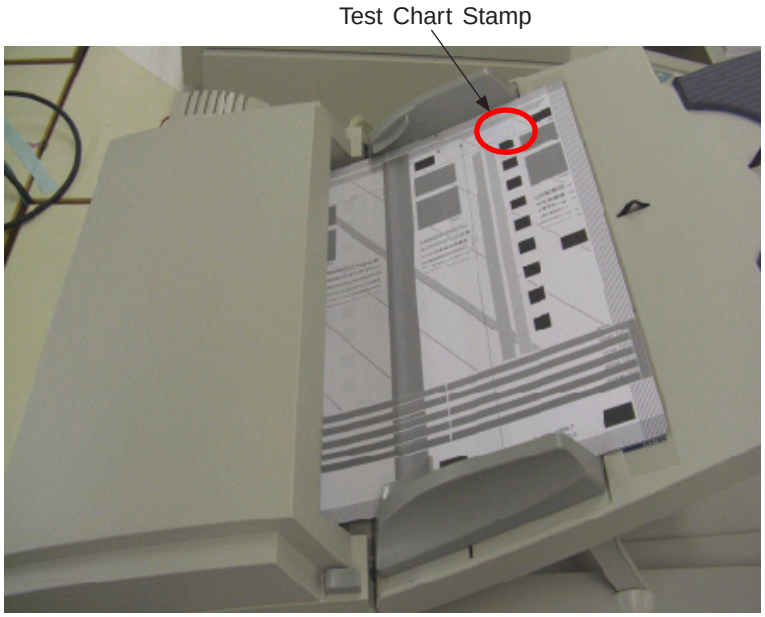
(15) FlowTest starts and the window shown below appears. Enter TEST under Input User E/N and click OK.



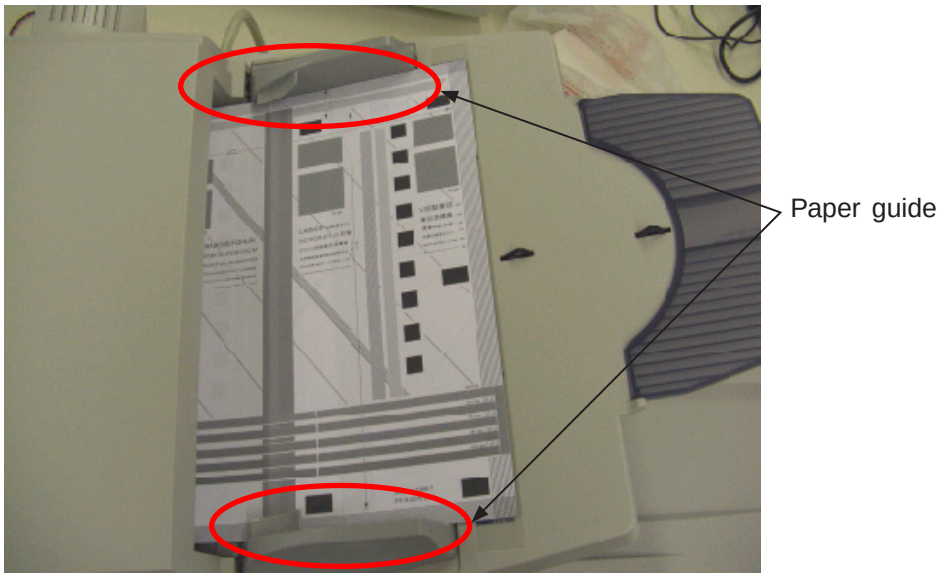
(16) The window shown below appears. Select S9860 and click OK.



(17) Load five (skew chart: 43798701) originals on the ADF tray, being sure that a test chart stamp is at the upper right when viewed from the front of the scanner (the originals cannot be scanned when not oriented properly).

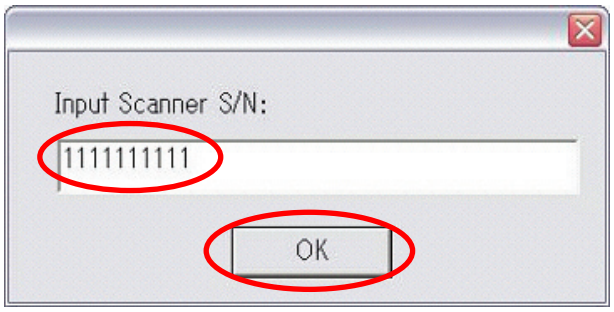


(18) Adjust the paper guides so not to leave space between the originals and them.



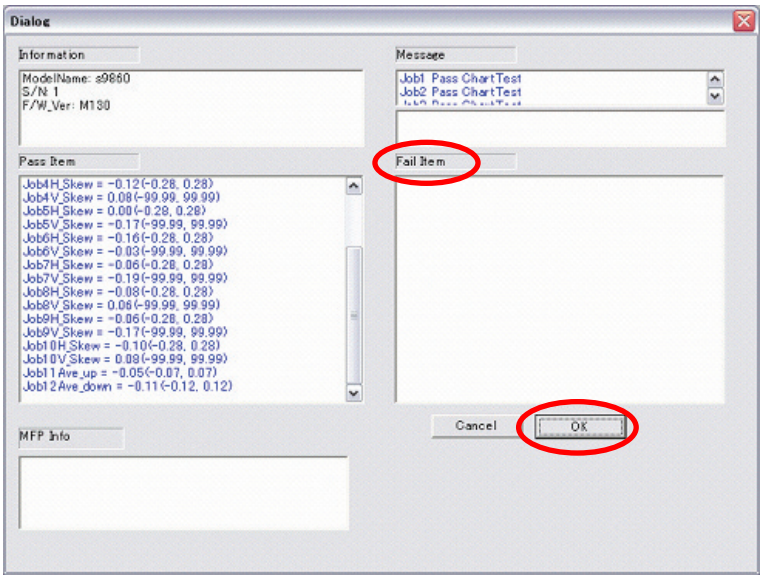
(19) The following appears. Click Start.

(20) Enter the serial number for the scanner and click OK.



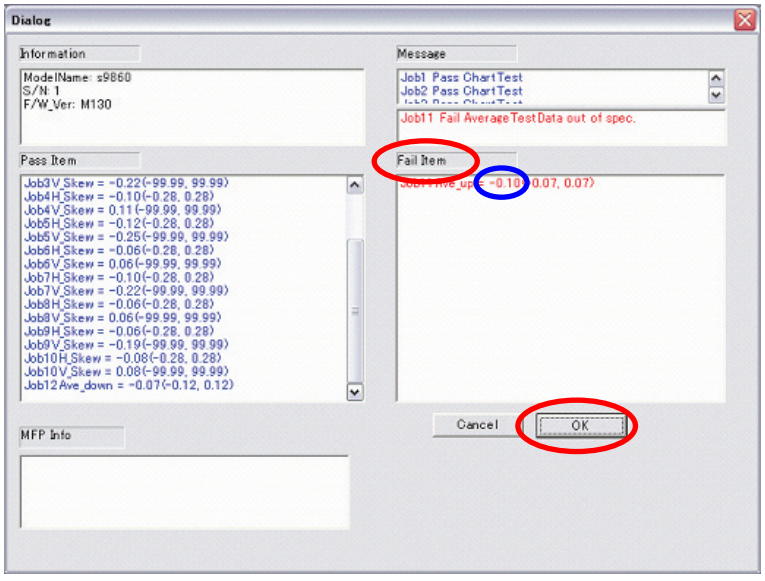
(21) Be sure again that the originals are loaded properly on the ADF tray. Press the OK button on the following window, and the FlowTest starts.

(22) The result of the test is displayed when the scanner completes scanning the originals. When the scanner passed the test: Nothing appears under Fail Item. Click the OK button, and the dialog box closes.



(23) Click the check mark (√) and close the FlowTest tool, and this adjustment completes.

(24) When the scanner fails the test: A measured skew value appears under Fail Item. Take a note of the value to adjust the scanner, referencing the value for Job11 or Job12. Press the OK button, and the dialog box closes.



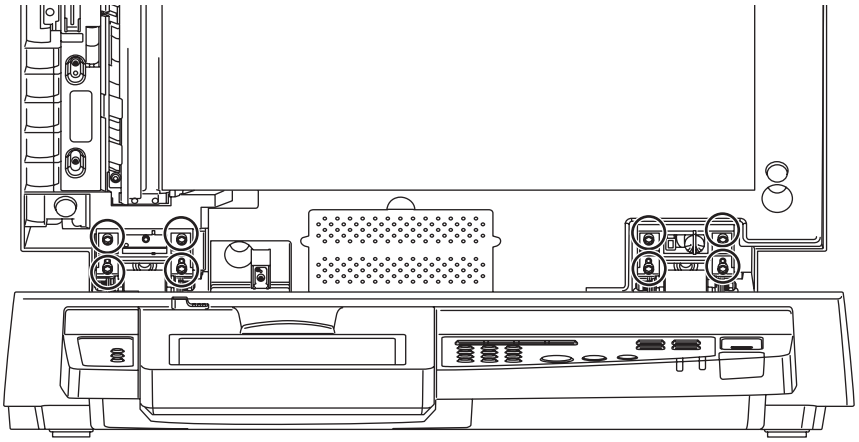
Note: Test data can be found through a path C:\FLOWTEST\S9860\20XXXXXX.csv.

(25) Click the following cross sign (x) and close the FlowTest tool.

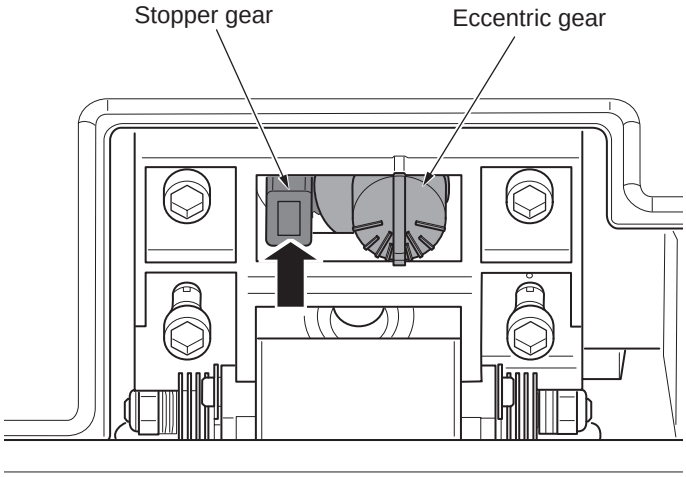
The scanner needs to be adjusted. Go to the next step (26).

(26) Raise the ADF unit and, to prevent the glass from being damaged with a hexagon screw, put paper over the glass.

(27) Loosen (but do not remove) the eight hexagon screws.



(28) Press the stopper gear, and turn the eccentric gear with a coin or a similar tool.



See below for the deskew amount to set.

Note: With the stopper gear returnable, adjust the eccentric gear.

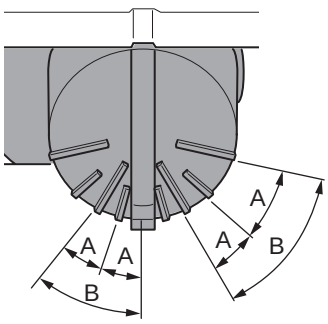


Table 5.1 Deskew Amounts

In degrees

	A	B
Clockwise	0.5mm	1.0mm
Counterclockwise	-0.5mm	-1.0mm

When the value displayed on the test in step (22) is positive, turn the eccentric gear clockwise.
Job11 Specification: -0.07 to +0.07 (degree)
Job12 Specification: -0.12 to +0.12 (degree)

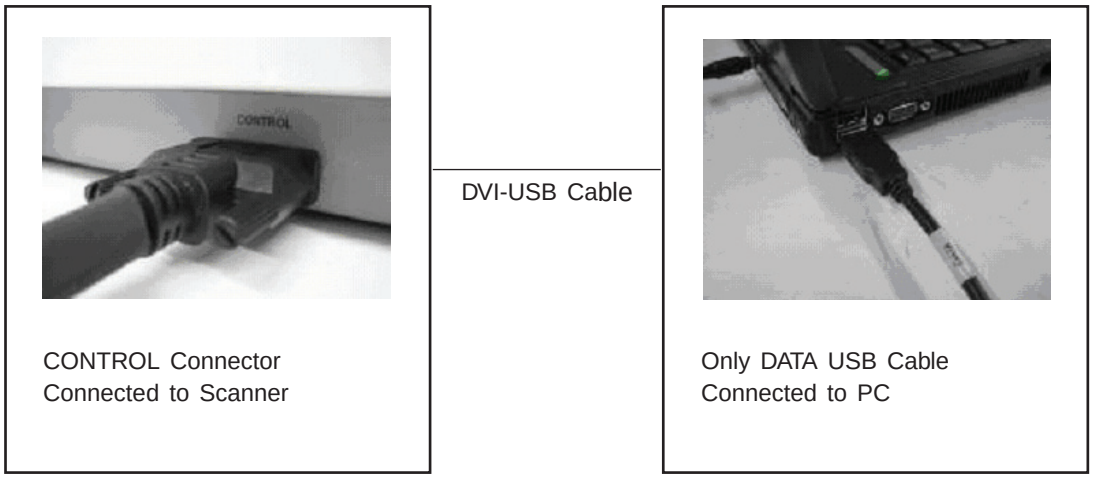
(29) Tighten the eight screws, and do the steps from (1) again to adjust the background sheet.

(30) Perform the test from step (14) again.

5.3.2 Learning

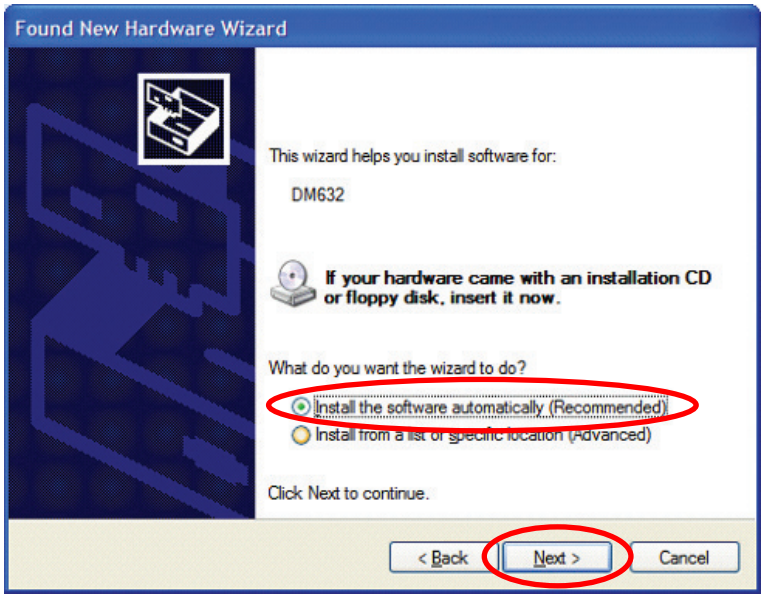
The Learning tool adjusts the scan gradation and scan start position of a C9850MFP scanner.

(1) As shown in the following diagram, connect a PC and a scanner to adjust, and turn on the scanner:

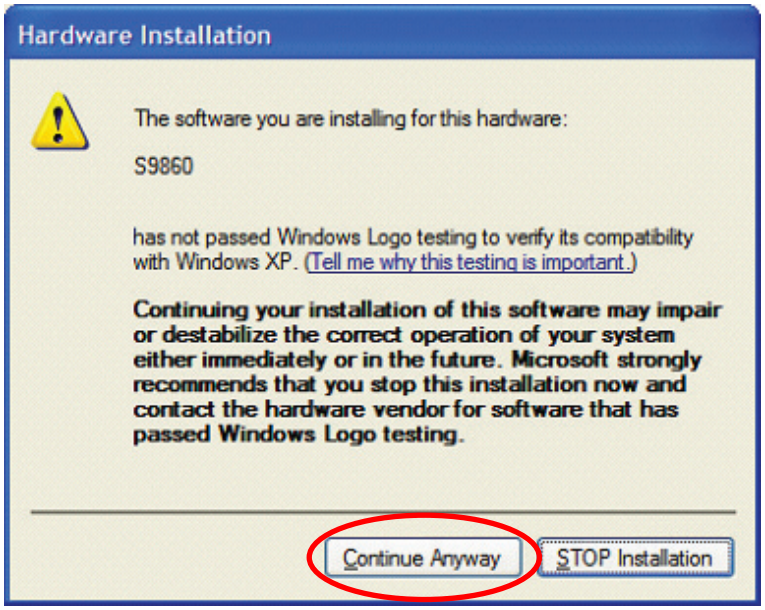


A hardware wizard starts only when the PC newly finds the scanner. The PC has not recognize the scanner till now, and the message shown below appears. Select “No, not this time” and click Next.

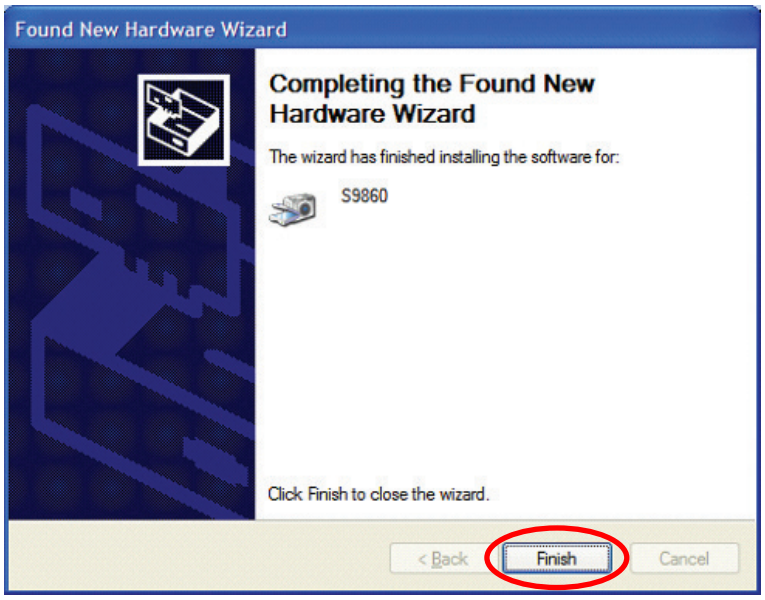
(2) The message shown below appears. Select “Install the software automatically” and click Next (configure a scanner driver for the scanner for the PC to recognize new hardware).



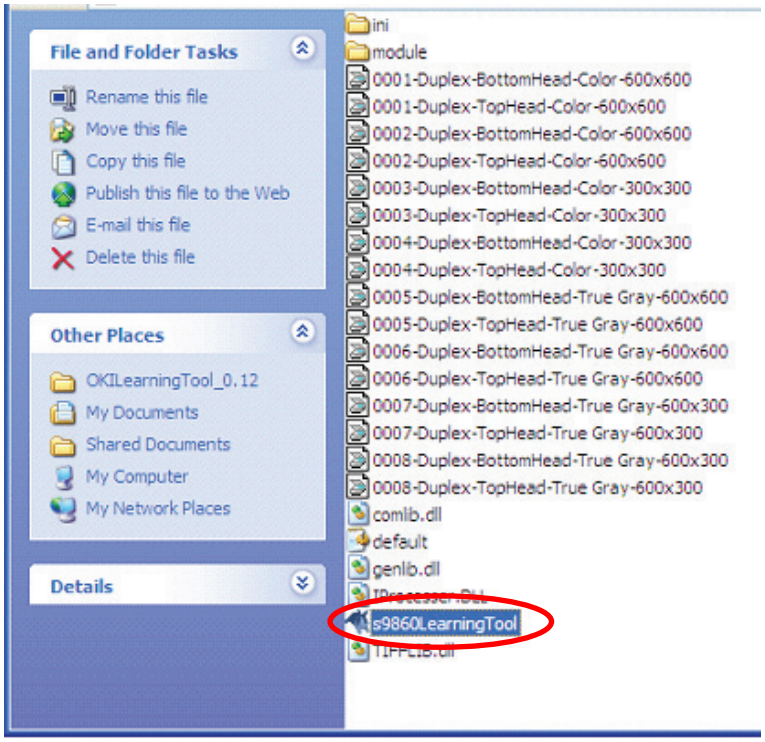
(3) A search for the scanner driver starts and the message shown below appears. Select Continue Anyway.



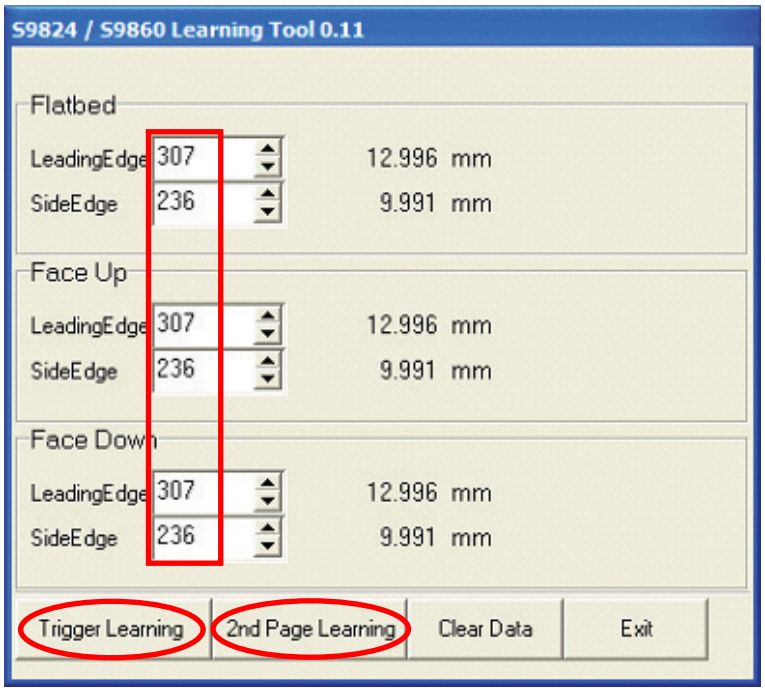
(4) The scanner driver has just been configured. Click Finish.



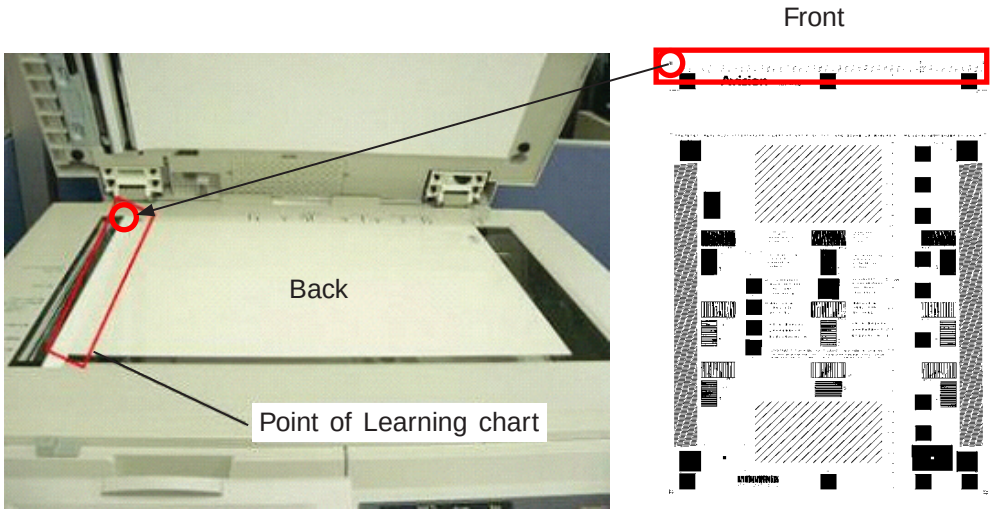
(5) Double-click Learning Tool to start the Learning tool.



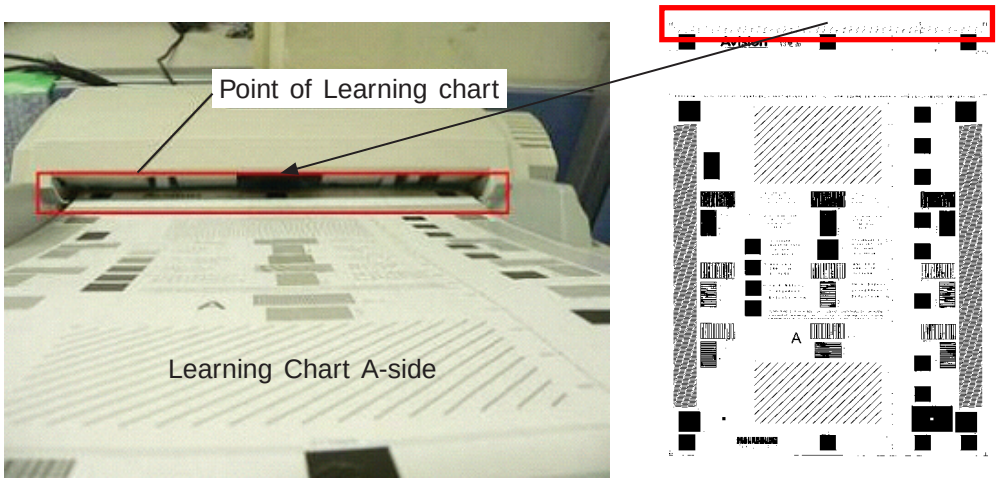
(6) The window shown below appears. Enter the following values.



(7) Load a Flatbed learning chart (part No. 43945901) securely on the document glass. Load an ADF learning chart (part No. 43945801) securely on the ADF.

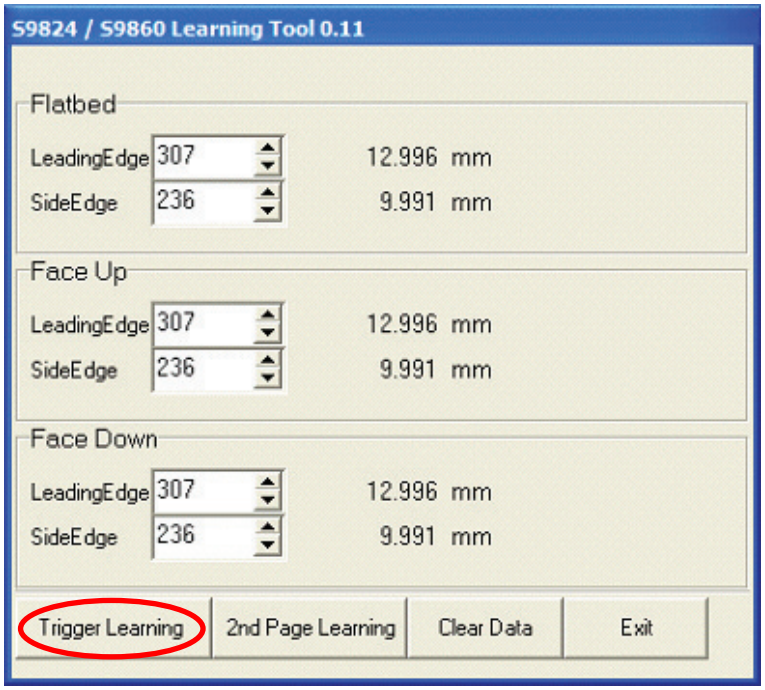


Flatbed Learning Chart Loaded on Document Glass



Two ADF Learning Charts Loaded on ADF

(8) Click Trigger Learning.



(9) The message shown below appears. Enter the Flatbed learning chart number and click OK.

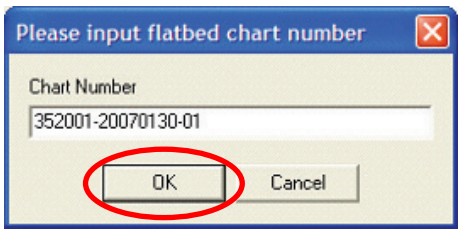
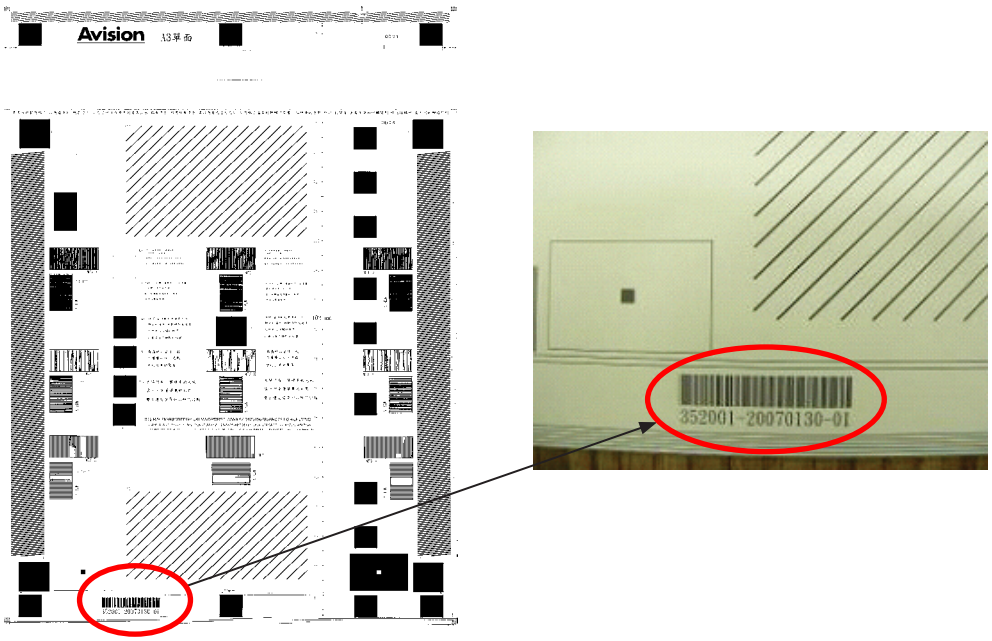


Chart Number 352001-20070130-01 in Left Example



Flatbed Learning Chart Number

(10) The message shown below appears. Enter the ADF learning chart number and click OK.

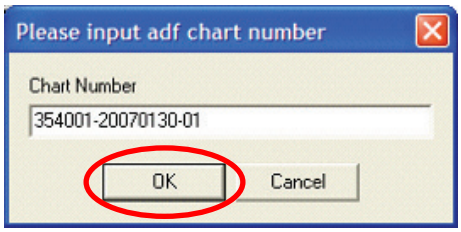
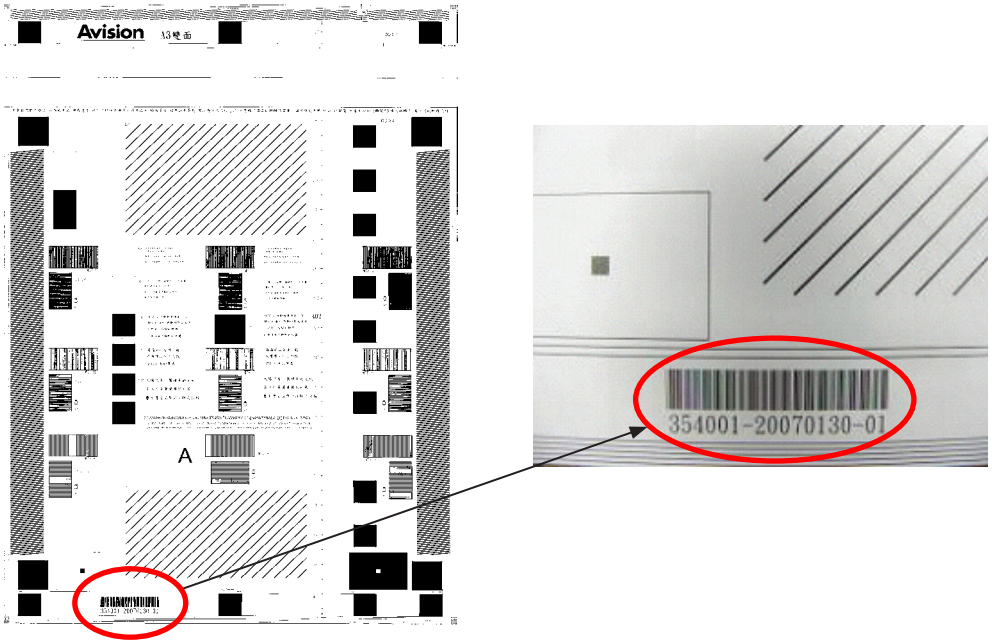
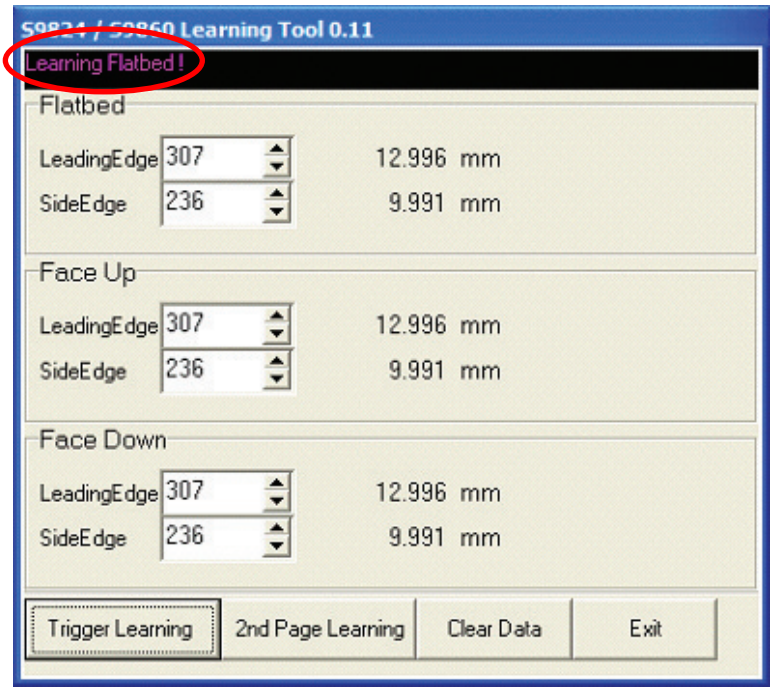


Chart Number 54001-20070130-01 in Left Example

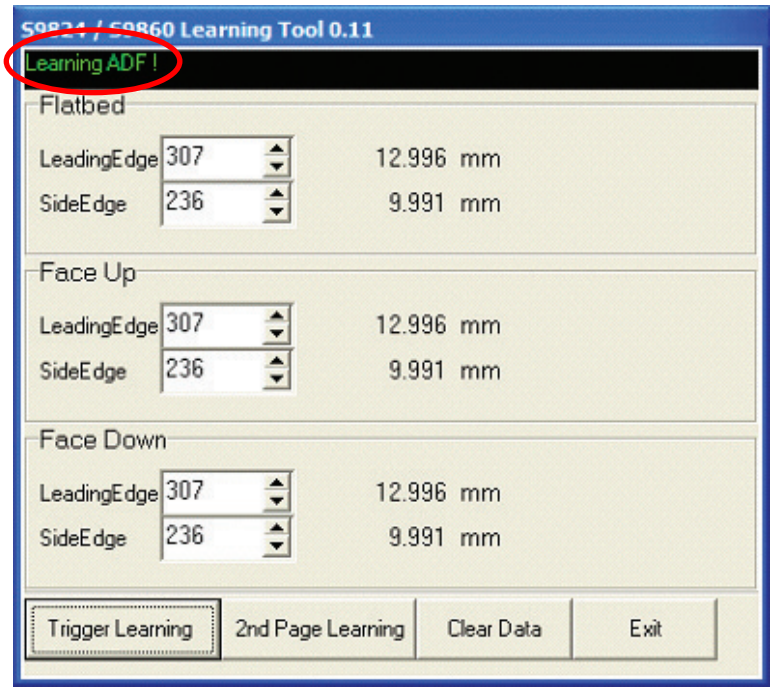


ADF Learning Chart Number

(11) The scanner automatically starts scanning on the flatbed (three times). The following message is showing during the scanning:



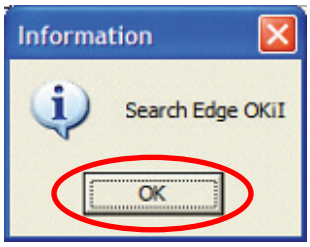
(12) The scanner automatically starts scanning on the ADF after finishing the scanning on the flatbed (have the scanner automatically perform scanning on the ADF three times). The following message is showing during the scanning on the ADF.



(13) After the scanner finishes the scanning on the ADF, load one of the same ADF learning charts on the ADF.

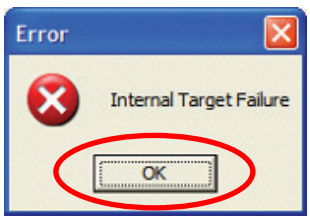
(14) Repeat step (13).

(15) When the scanner finishes scanning on the ADF three times, the message shown below appears. Click OK.

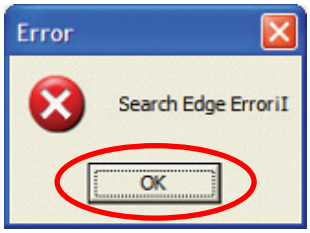


Note: Dealing with Error

When an error occurs while Trigger Learning is running, the dialog box shown below appears. Click OK.



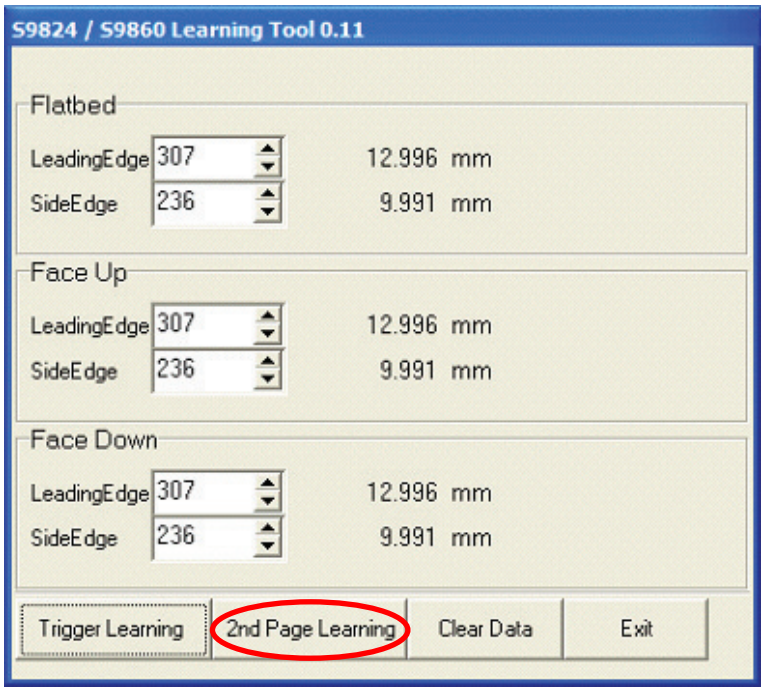
The dialog box shown below appears. Click OK.



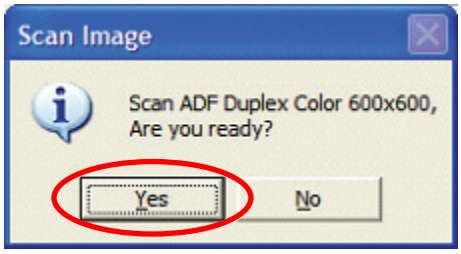
Restart the scanner and perform the procedure again from step (7). When an error occurs again, do the following:

- When the error is through the flatbed scanning: Use the troubleshooting flowchart table 3.12 from the top to perform checking.
- When the error is through the ADF scanning: Use the troubleshooting flowchart table 3.18 from the top to perform checking.

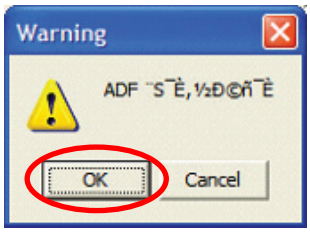
(16) Click 2nd Page Learning (manually perform this step four times).



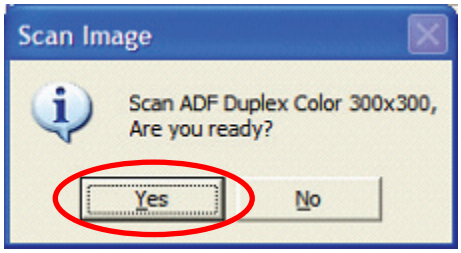
(17) First scanning (Scan ADF Duplex Color 600 x 600). The message shown below appears. Load two ADF learning charts on the ADF and click Yes.



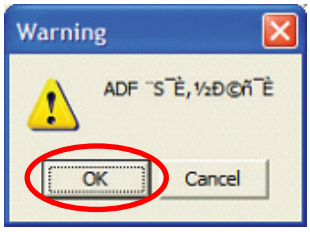
(18) The message shown below appears. Click OK.



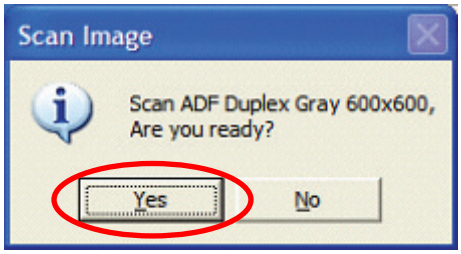
(19) Second scanning (Scan ADF Duplex Color 300 x 300). The message shown below appears. Load two ADF learning charts on the ADF and click Yes.



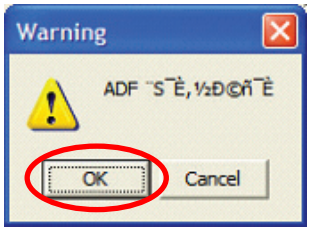
(20) The message shown below appears. Click OK.



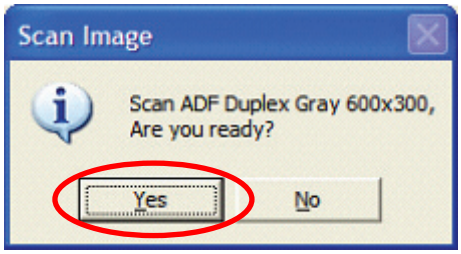
(21) Third scanning (Scan ADF Duplex Gray 600 x 600). The message shown below appears. Load two ADF learning charts on the ADF and click Yes.



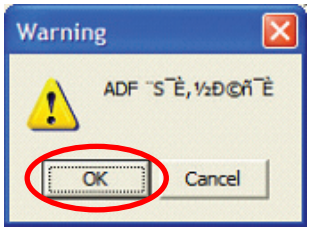
(22) The message shown below appears. Click OK.



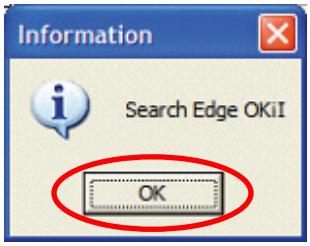
(23) Fourth scanning (Scan ADF Duplex Gray 600 x 300). The message shown below appears. Load two ADF learning charts on the ADF and click Yes.



(24) The message shown below appears. Click OK.



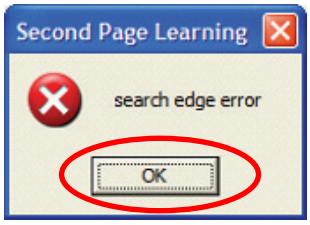
(25) When the scanner finishes scanning on the ADF four times, the message shown below appears. Click OK.



The learning is completed successfully.

Note: Dealing with Error

When an error occurs during the second page learning, the dialog box shown below appears. Click OK.



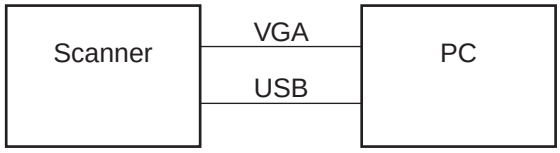
Restart the scanner and perform the procedure again from step (7). When an error occurs again, do the following:

- When the error is through the flatbed scanning: Use the troubleshooting flowchart table 3.12 from the top to perform checking.
- When the error is through the ADF scanning: Use the troubleshooting flowchart table 3.18 from the top to perform checking.

5.3.3 Touch Panel calibration

The touch detection fields on the touch panel of each C9850MFP scanner can be adjusted by using the method shown below.

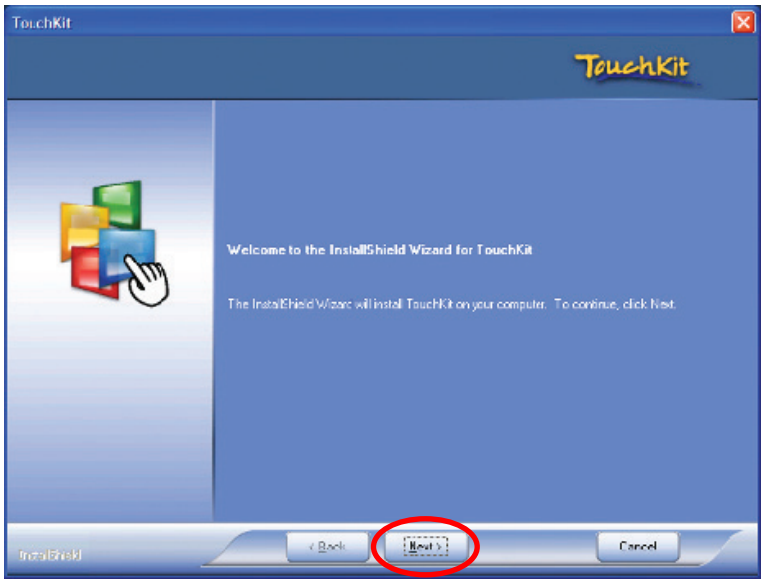
Connect the scanner to a PC to adjust it (refer to the following diagram).



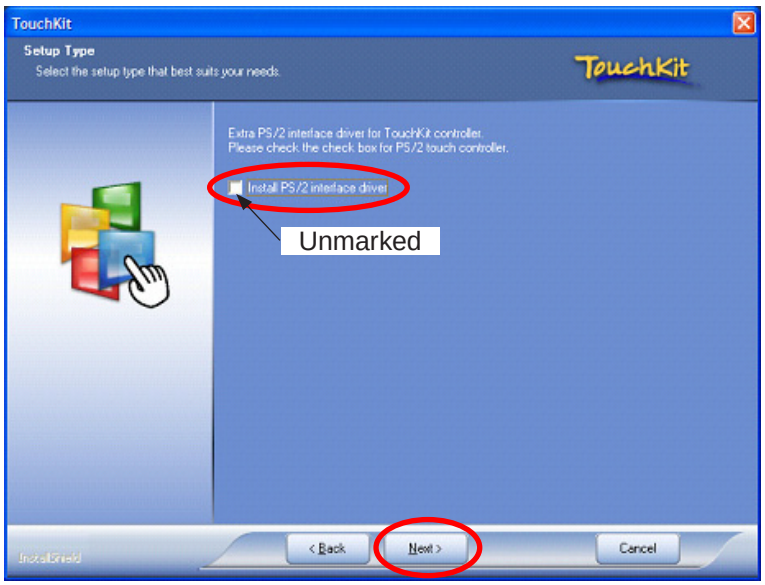
Calibration Method

The adjustment method described here aligns the touch detection fields and display positions of the elements on the panel:

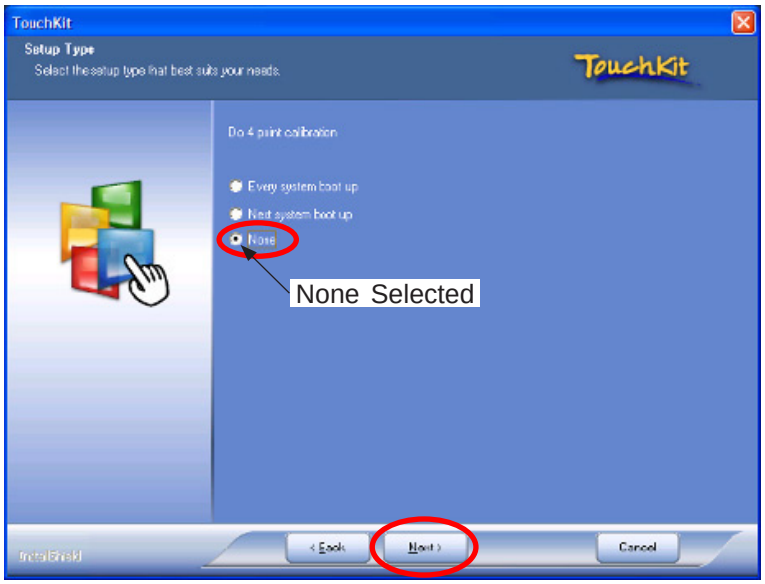
(1) Download Touch Kit onto a PC (download and unpack the compressed file named: All_In_One_2k_XP_Vista_5.0.0.5017.zip). Run setup.exe to install Touch Kit on the PC. The message shown below appears. Click Next.



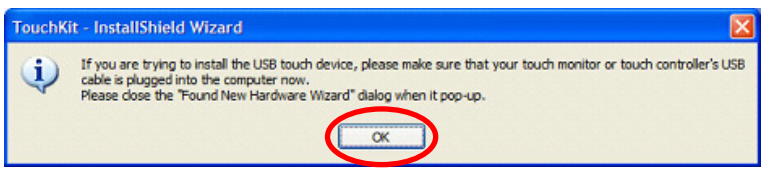
The message shown below appears. Unmark the checkbox and click Next.



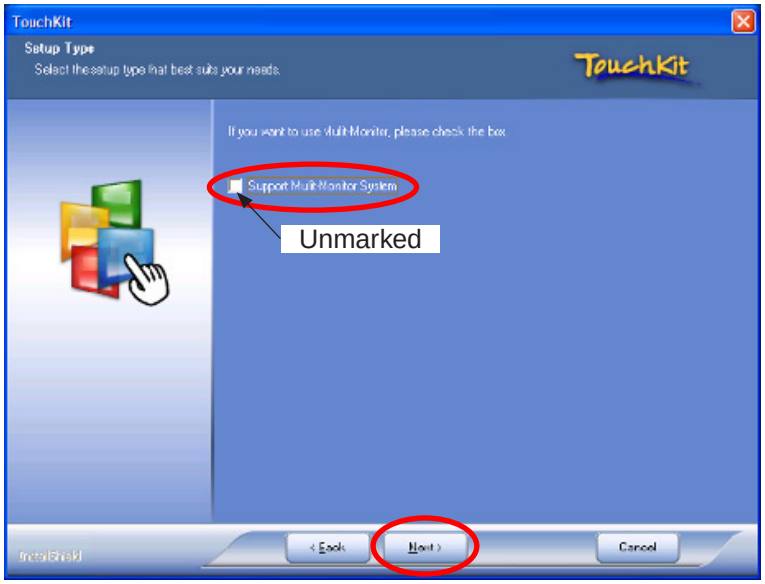
The message shown below appears. Select None and click Next.



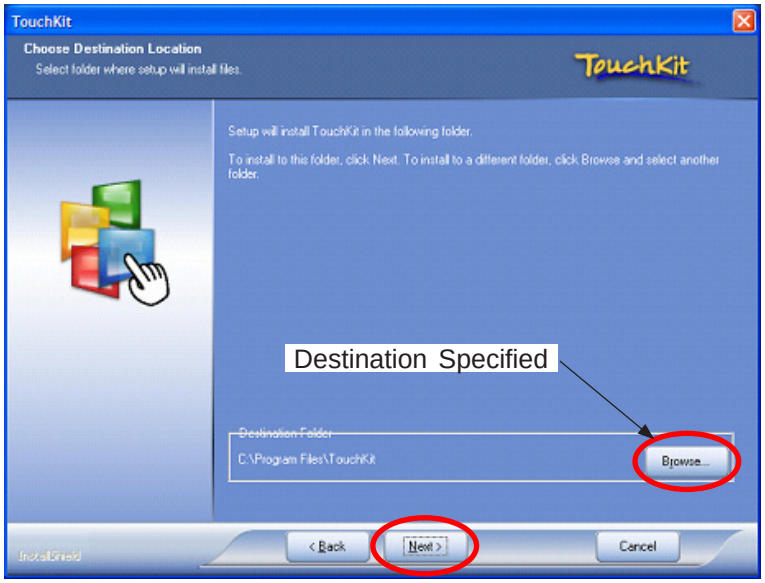
The message shown below appears. Click OK.



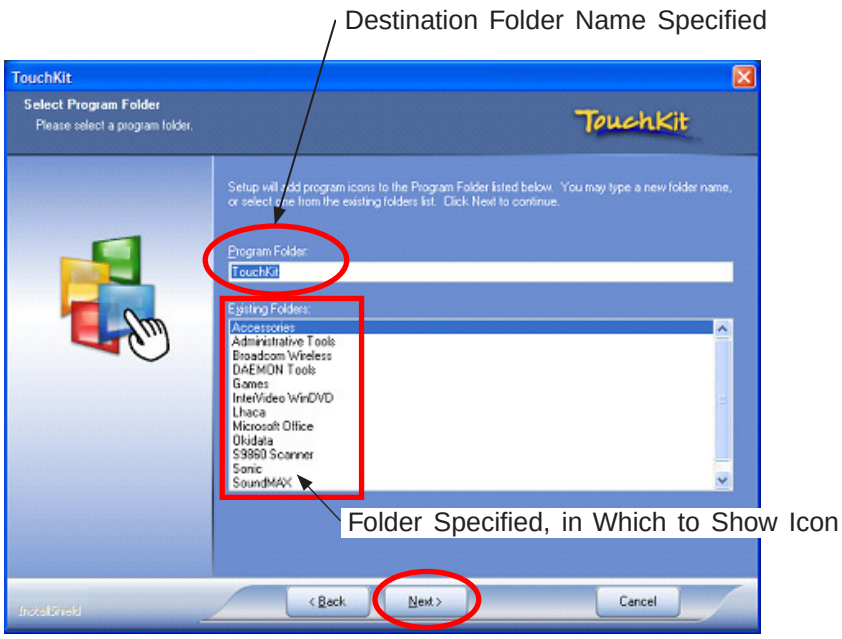
The message shown below appears. Unmark the checkbox and click Next.



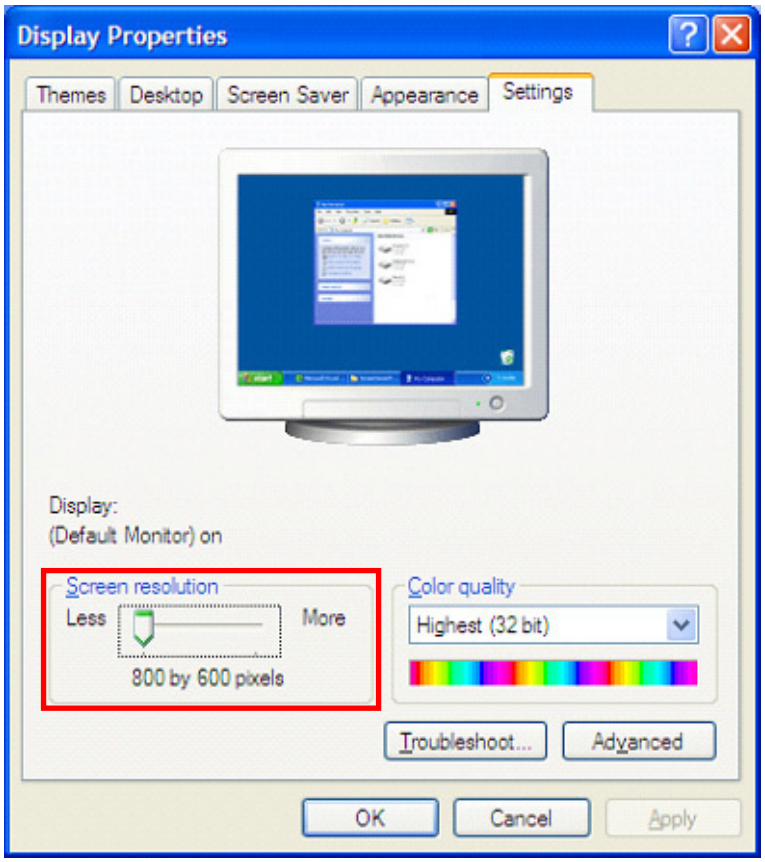
The message shown below appears. Specify the destination folder to install Touch Kit. Verify the shown destination folder and click Next.



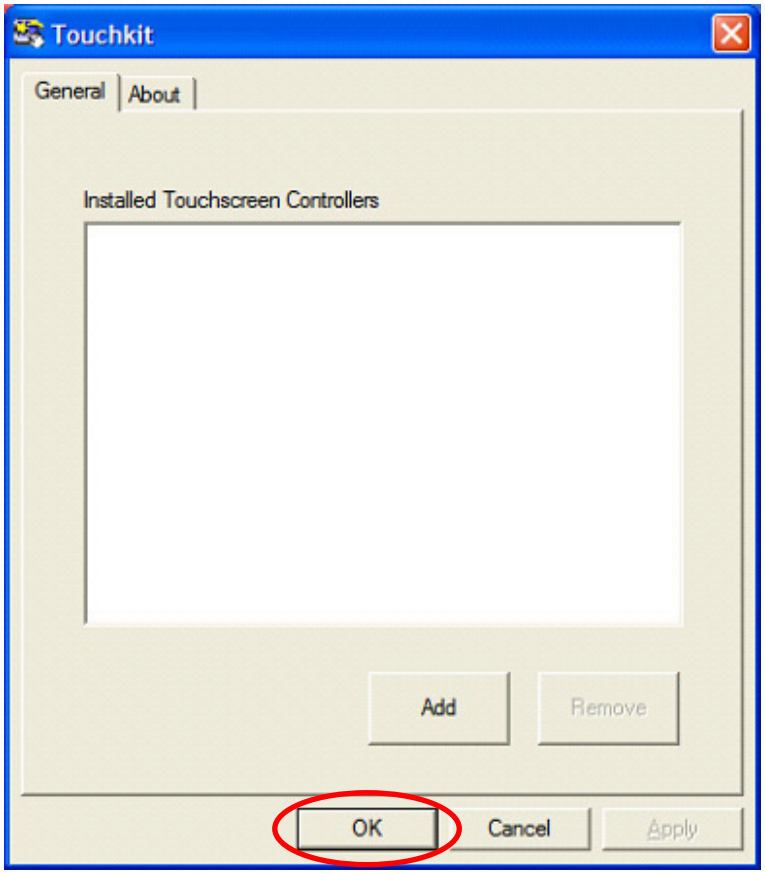
The message shown below appears. Specify the name for the destination folder, and the folder in which to show the icon. Verify the destination folder name and the icon folder and click Next (the installation of Touch Kit starts).



(2) Change the PC's screen resolution to 800 x 600.



When the installation of Touch Kit is completed successfully, the window shown below appears. Click OK.



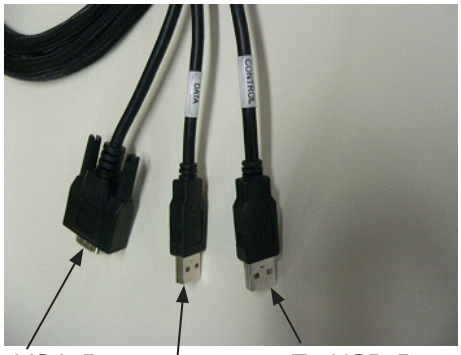
(3) Connect the scanner and the PC with the following cables and turn on the scanner.

Cable to Connect Scanner and PC

To Scanner Control Port

To PC

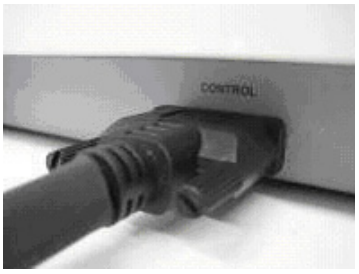
Control Port to Scanner



To VGA Port

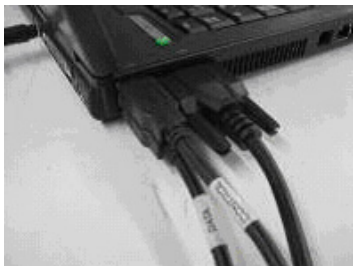
To USB Port

To USB Port



CONTROL Connector Connected to Scanner

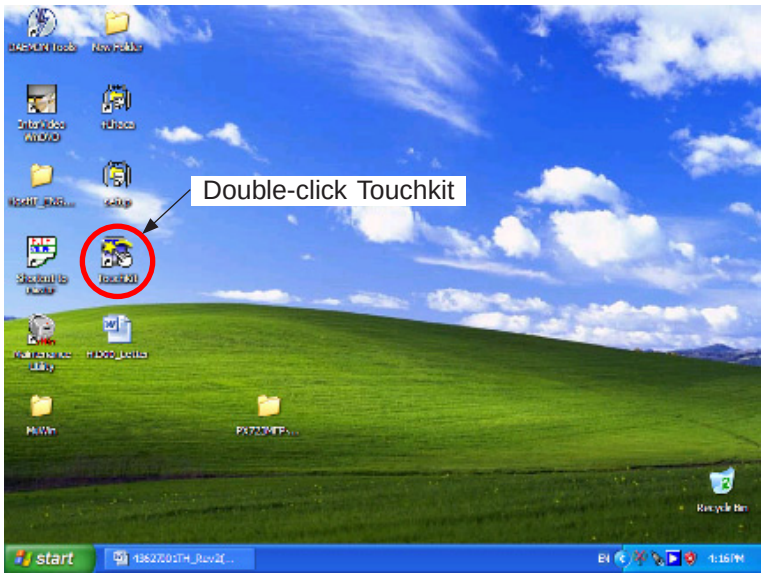
DVI-USB Cable



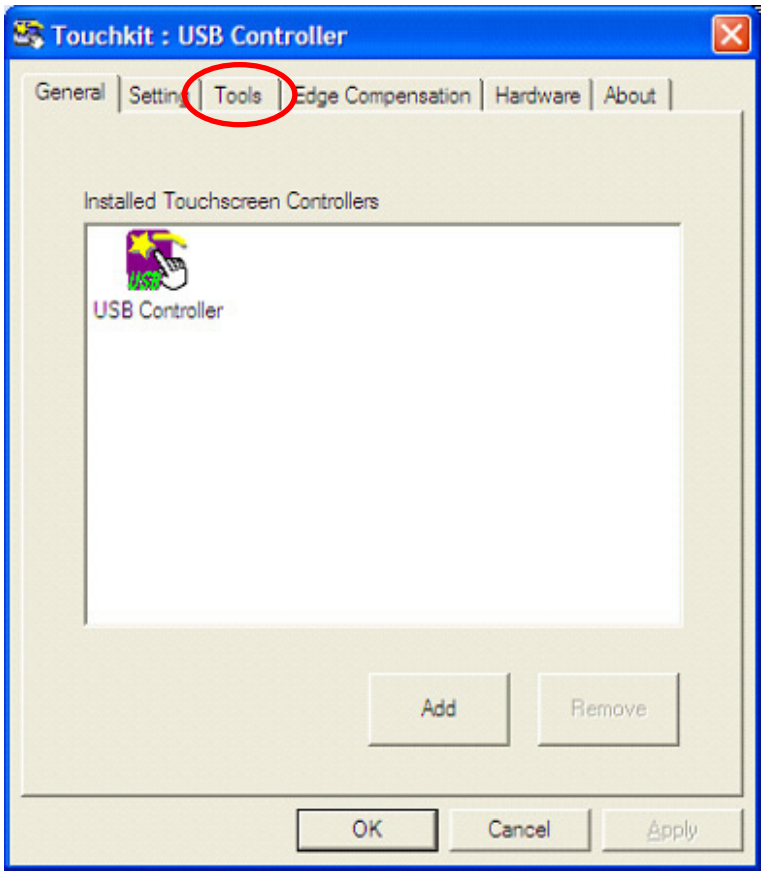
Only DATA and CONTROL USB Cables and VGA Cable Connected to PC

(4) Produce the PC's VGA display output for the scanner touch panel to display the same window as the PC (be sure that the scanner touch panel displays the same window as the PC monitor).

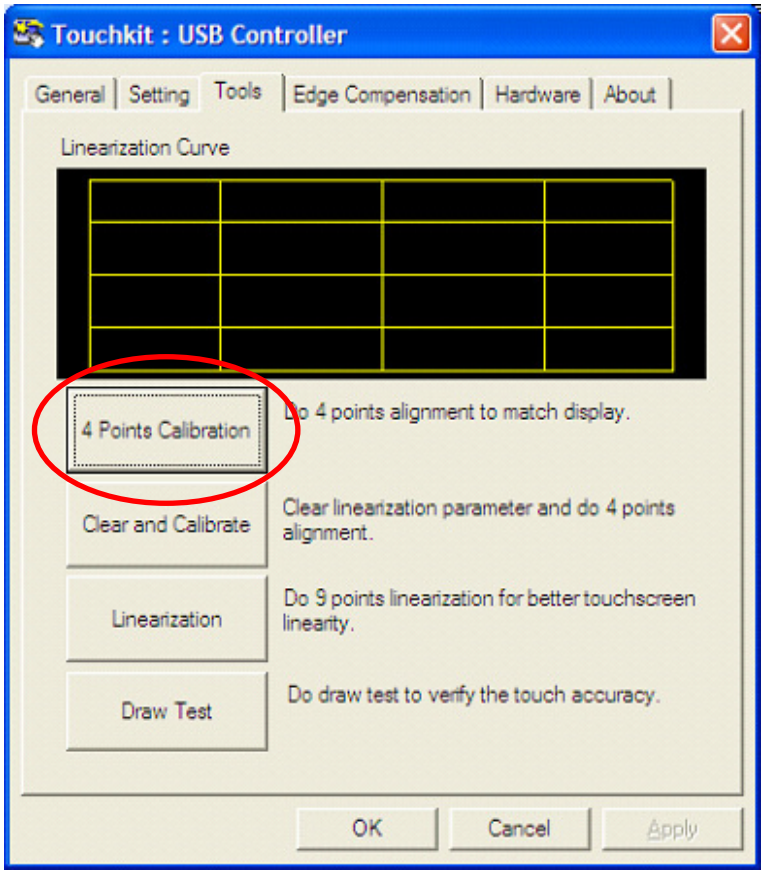
(5) Click Touchkit to start Touch Kit.



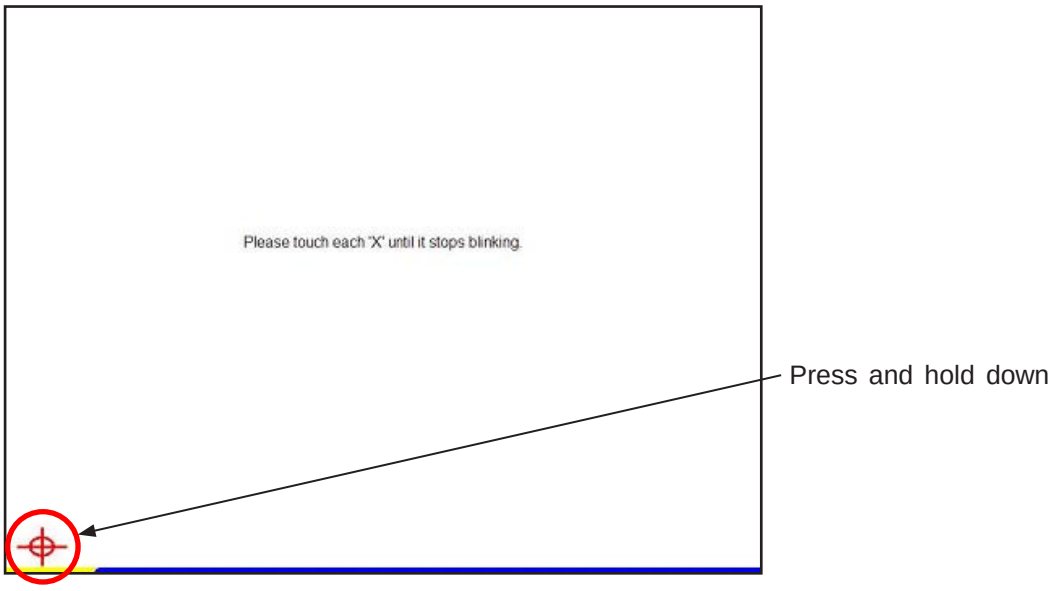
(6) The window shown below appears. Click Tools.



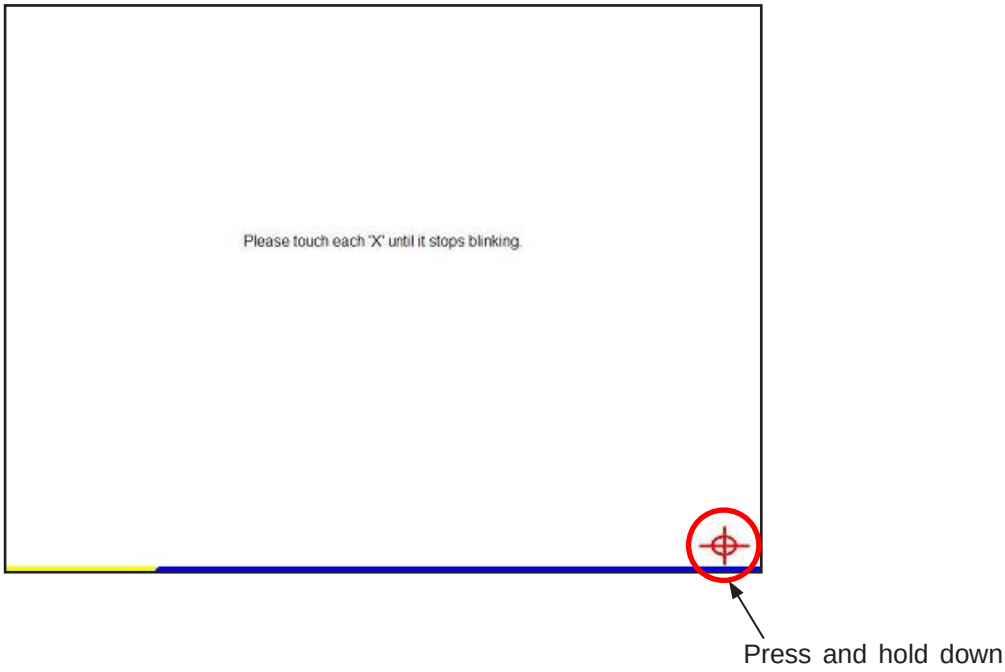
(7) The window shown below appears. Click 4 Points Calibration.



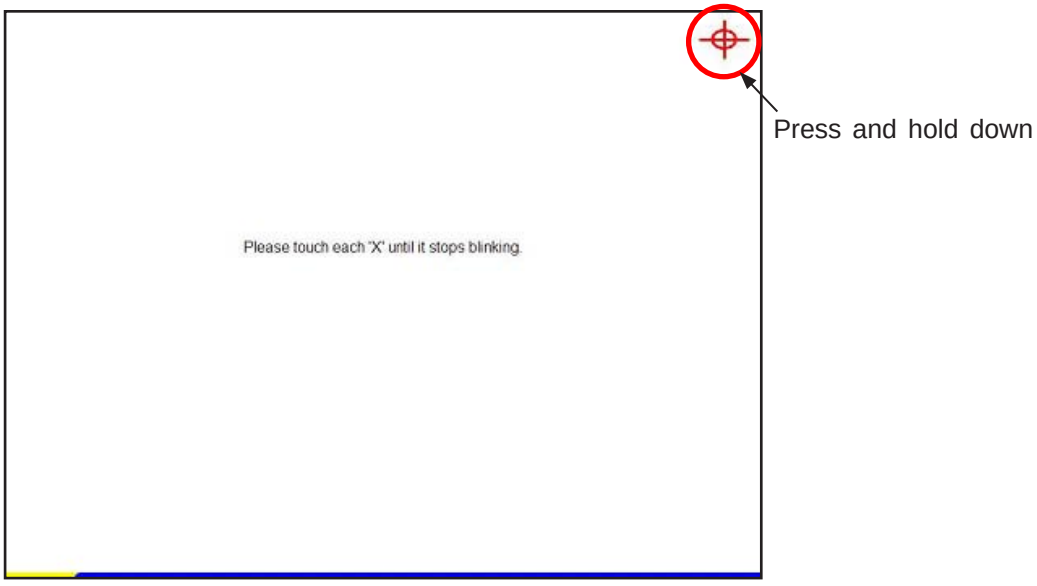
(8) The scanner touch panel displays the window shown below. Press and hold down (do not release) the center of the circle in the lower left corner of the scanner touch panel until the circle ends blinking.



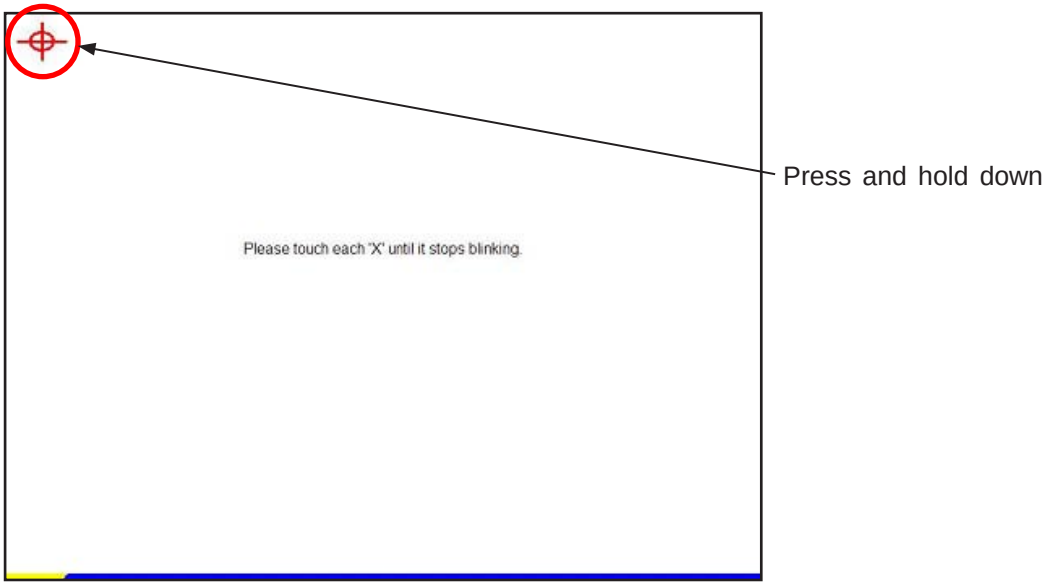
(9) The circle automatically moves to the lower right corner of the panel and blinks. Press and hold down (do not release) the center of the circle until it ends blinking.



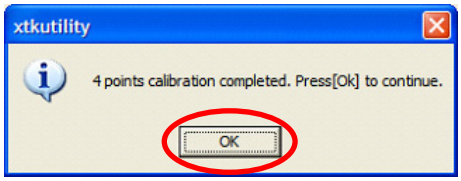
(10) The circle automatically moves to the upper right corner of the panel and blinks. Press and hold down (do not release) the center of the circle until it ends blinking.



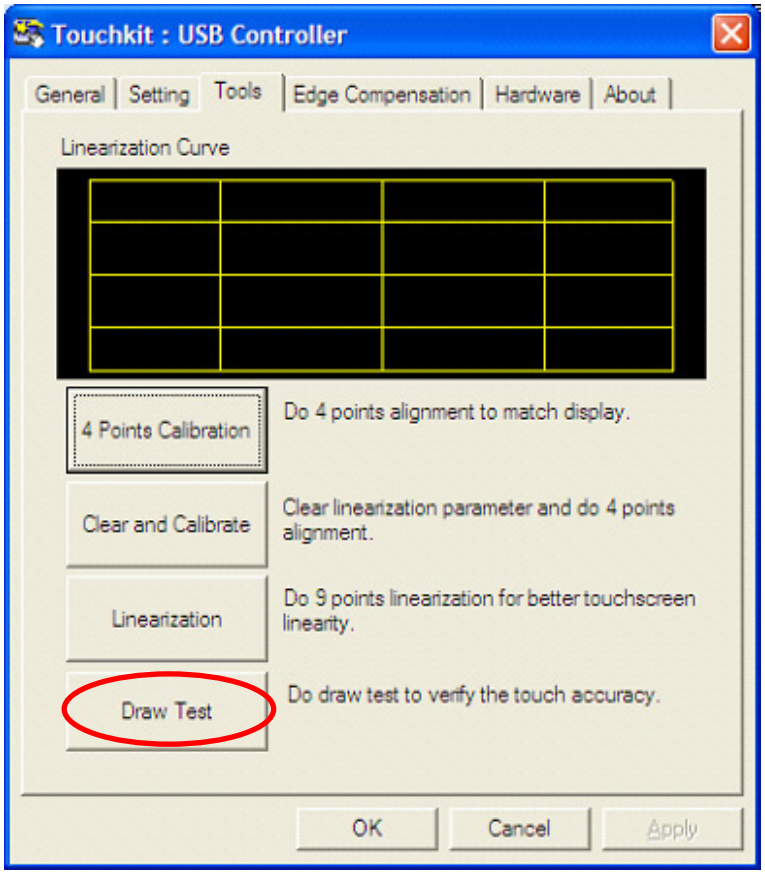
(11) The circle automatically moves to the upper left corner of the panel and blinks. Press and hold down (do not release) the center of the circle until it ends blinking.



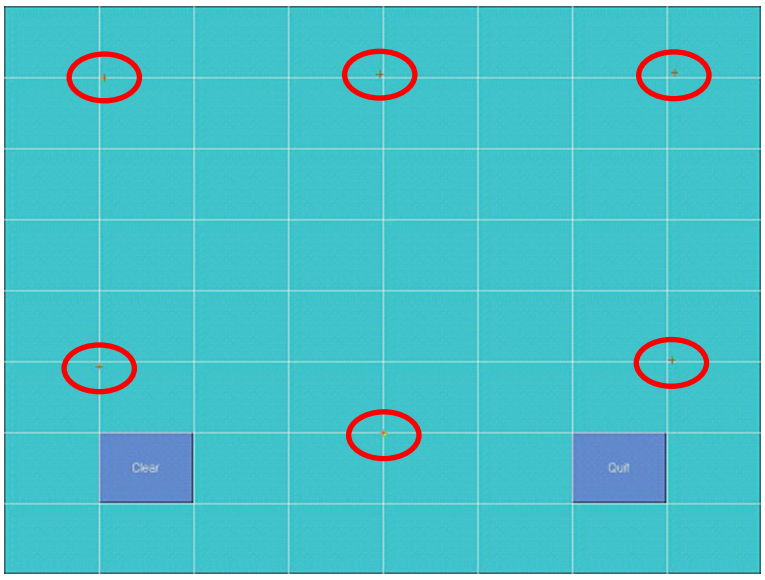
(12) When this calibration is completed successfully, the message shown below appears. Click OK. When the calibration fails, restart the scanner and return to step (7).



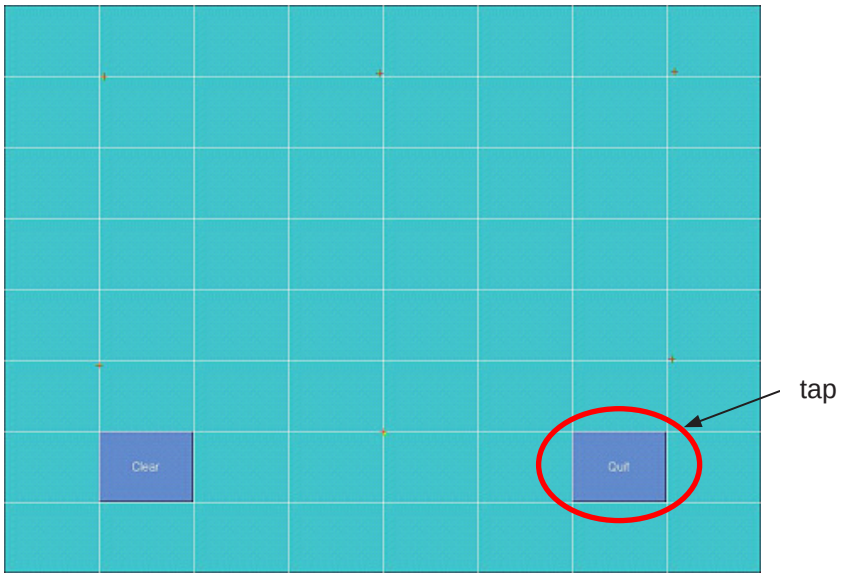
(13) Click Draw Test. Check for any misalignment between the actual touch detection fields and display positions of the elements on the panel.



(14) The window shown below appears. Tap the six points shown below and check them for any deviation. When there is an extremely large deviation of any point of them, return to step (7) to execute 4 Points Calibration again to align it.



(15) When there are no extreme deviations, tap Quit to end Draw Test.



(16) Restart the scanner.

6. DISASSEMBLY

6.1 Replacement of Parts

This section describes the procedures for on-site replacement of parts or units of C9850MFP scanners. The procedures are for removing them. To attach, reverse the procedures.

The part numbers used in this document differ from those used in 43627001TL (block diagrams for disassembly for maintenance) and 43627001TR (RSPL).

6.1.1 Notes on Replacement of Parts

(1) Before replacing a part of a C9850 scanner, be sure to disconnect the AC cord and interface cable from the scanner.

(a) To disconnect the AC cord from the scanner:

① Turn off the scanner (move the power switch of the scanner to the off " ○ " position).

② Unplug the AC plug from the AC outlet.

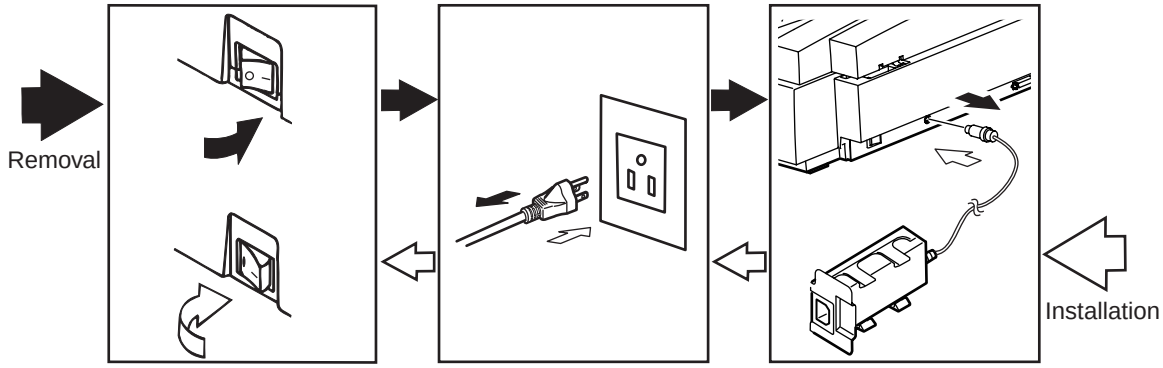
③ Unplug the DC cord and the interface cable from the scanner.

(b) To connect the AC cord and the interface cable to the scanner:

① Plug the AC cord and the interface cable into the scanner.

② Plug the AC cord into the AC outlet.

③ Turn on the scanner (move the power switch of the scanner to the on " | " position).



(2) Do not disassemble C9850 scanners so long as they operate properly.

(3) Do not disassemble more than necessary. Do not detach parts not specified in the part replacement procedures.

(4) Use the specified maintenance tools.

(5) Use the specified disassembly procedures, or part damage may occur.

(6) Temporarily install small parts, such as screws, to appropriate places to prevent them from missing.

(7) Do not use static-prone gloves when handling integrated circuits (ICs) or printed-circuit boards, including microprocessors, and ROM and RAM chips.

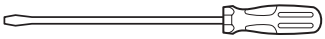
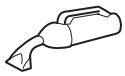
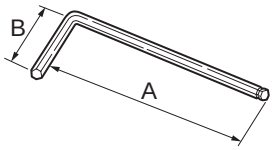
(8) Do not place printed-circuit boards directly on a scanner or floor.

(9) Efficiently conduct part replacement in a clean place.

[Maintenance tools]

Table 6-1-1-1 shows the tools necessary to replace printed-circuit boards or units:

Table 6-1-1-1 maintenance tools

No.	Maintenance tool		Quantity	Use For	Remarks
1		Screwdriver No.2-200 with Magnetic Tip	1	3- to 5-mm screw	
2		Screwdriver No.3-100	1		
3		Screwdriver No.5-200	1		
4		Handy Vacuum Cleaner	1		
5		Stylus P/N : 43393901	1		Avision's Parts No. 051-1640-0-SP
6		Ball-end Hex Wrench 3mm A:100mm or less B: 20mm	1		

6.2 Procedures for Replacing Parts

This section describes the procedures for replacing the parts or assemblies shown in the following disassembly table:

[Disassembly Table]

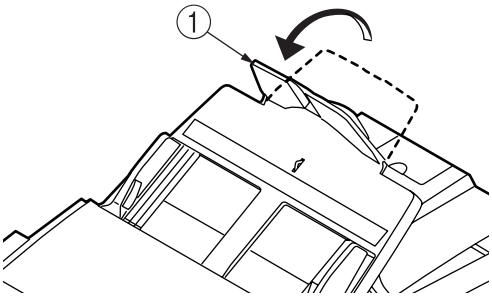
					Remarks
Scanner	1	ADF Unit	1	ADF Paper Support	
			2	ADF Paper Stopper	
			3	Ass'y Pad	
			4	PCBA (for ADF)	
			5	Ass'y Hinge Light/Heavy	
			6	Tray Ass'y	
			7	ADF Roller Maintenance kit	
	2	Flatbed Unit	1	Cover Panel Left Ass'y	
			2	Cover Panel Right Ass'y	
			3	LCD Ass'y	
			4	Cover Spacer Panel Ass'y	
			5	Ass'y Main Board	

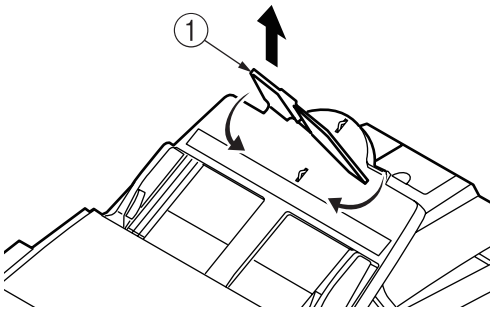
6.2.1 ADF Unit

6.2.1.1 ADF Paper Support

(1) Raise the ADF paper support ① about 90 degrees in the direction of the arrow.

(2) Bend either side of the ADF paper support ① in the direction of the arrow and pull it up.

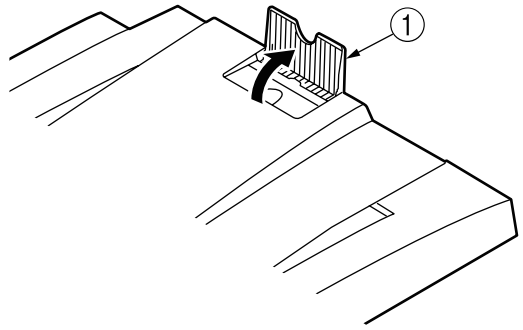


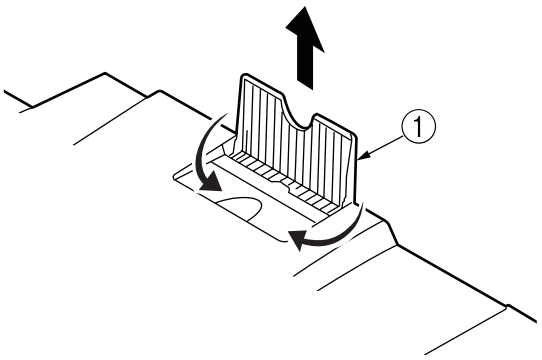


6.2.1.2 ADF Paper Stopper

(1) Raise the ADF paper stopper ① in the direction of the arrow.

(2) Bend either side of the ADF paper stopper ① in the direction of the arrow and pull it up.

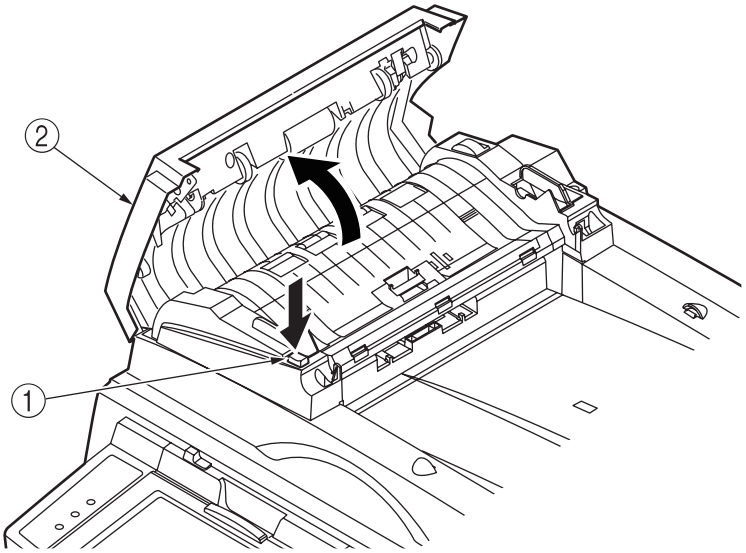


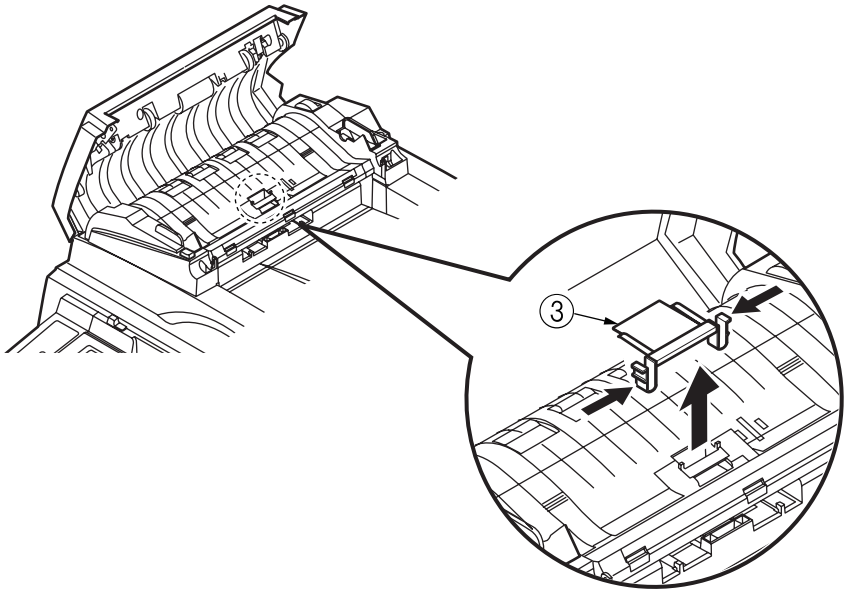


6.2.1.3 Ass'y Pad

(1) Press the cover opening button ①. In the direction of the arrow, open the ADF front cover ② and, until it locks, push it.

(2) Press the both arms of the ass'y pad ③ inward using two fingers, and pull it out.





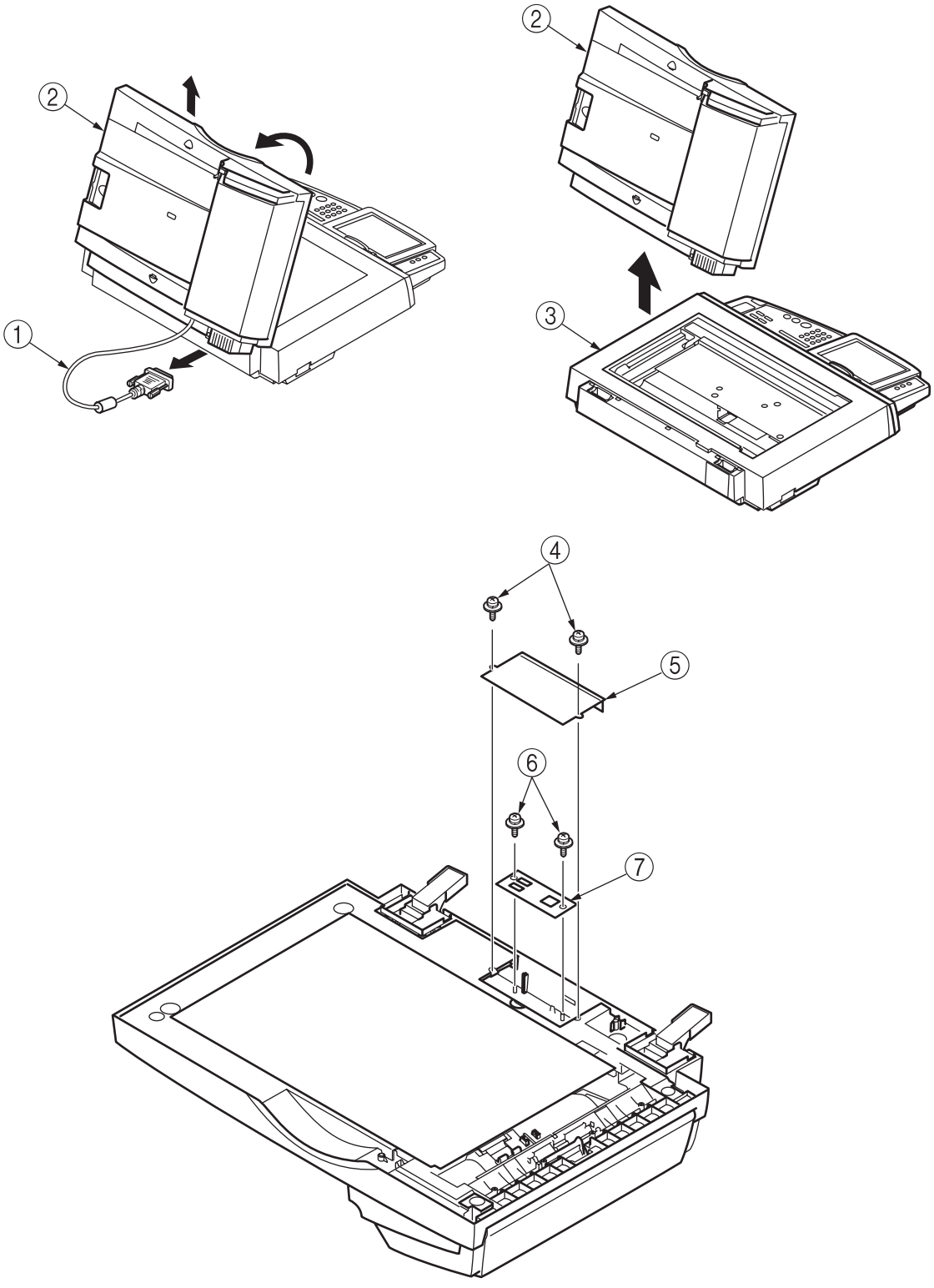
6.2.1.4 PCBA (for ADF)

(1) Remove the ADF cable ① and raise the ADF unit ②.

(2) Move the ADF unit ② in the direction of the arrow (straight up) to separate it from the flatbed unit ③. Reverse the ADF unit ②.

(3) Remove the screws ④ and the plate ⑤.

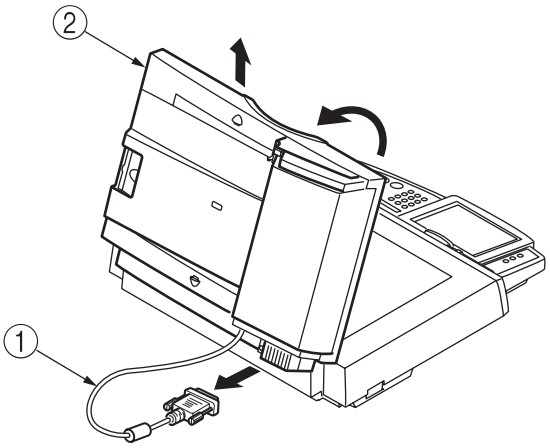
(4) Remove the screws ⑥ and all the connectors to detach the PCBA (for the ADF) ⑦.

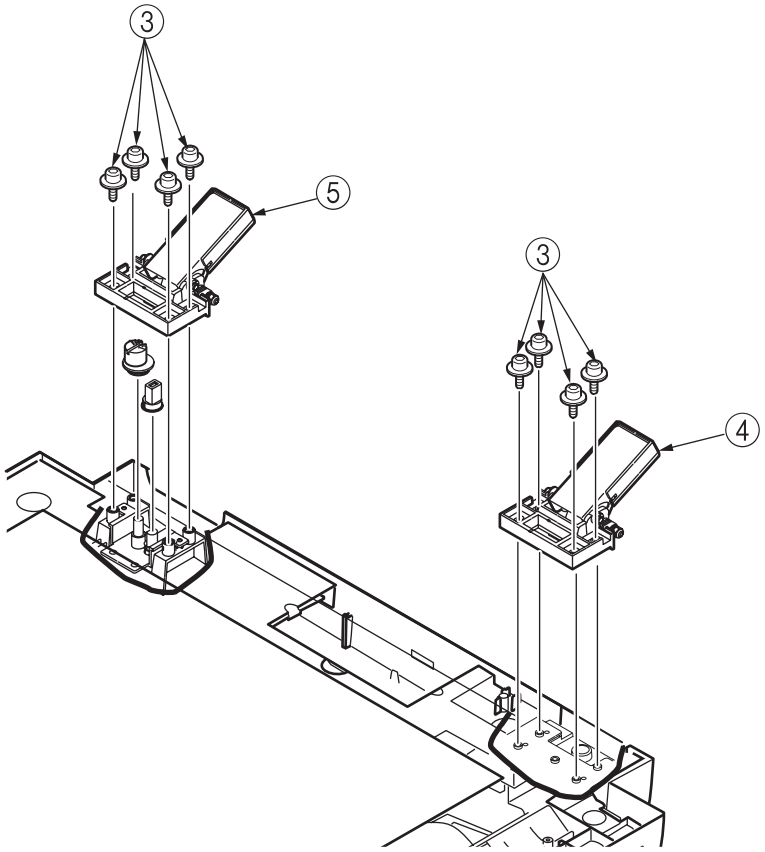


6.2.1.5 Ass'y Hinge Light/Heavy

(1) Remove the ADF cable ①, raise the ADF unit ②, and separate it from the flatbed unit. Reverse the ADF unit ②.

(2) Remove the eight screws ③ to detach the ass'y hinge heavy ④ and the ass'y hinge light ⑤.





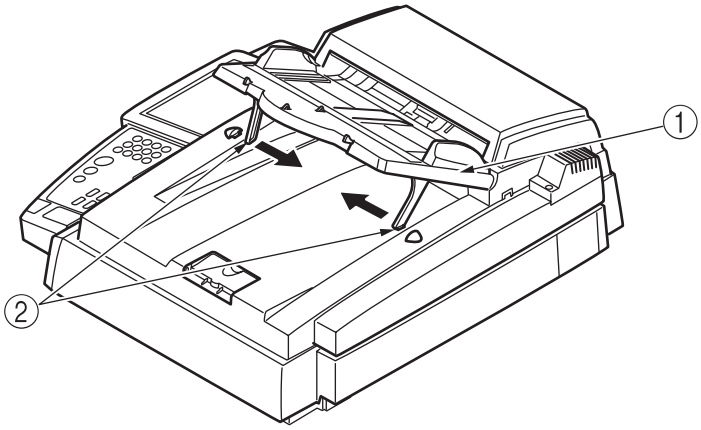
6.2.1.6 Tray Ass'y

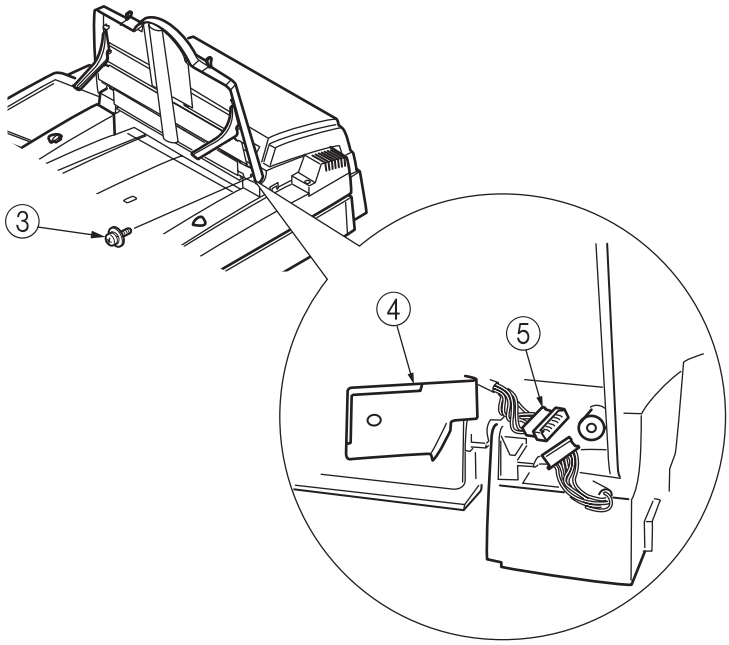
(1) Remove the legs ② of the folding tray ass'y ① in the direction of the arrow.

(2) Place the tray ass'y ① in the upright position.

(3) Remove the screw ③ to raise the plate ④.

(4) Remove the connector ⑤ and, by pulling the tray ass'y ① straight up, detach the ass'y.



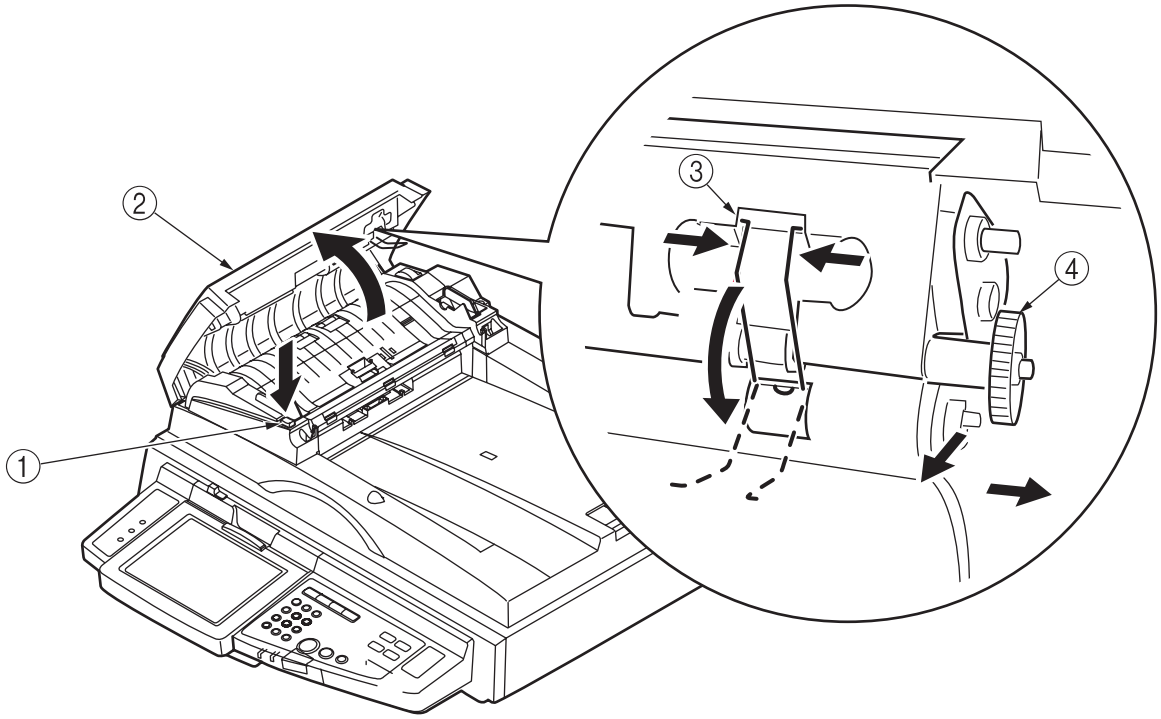


6.2.1.7 ADF Roller Maintenance kit

(1) Press the cover opening button ①. In the direction of the arrow, open the ADF front cover ② and, until it locks, push it.

(2) Press the wires ③ inward using two fingers to disengage the upper ends of the wires to remove the wires.

(3) Pull out the ass'y ADF roller ④ in the direction of the arrow.

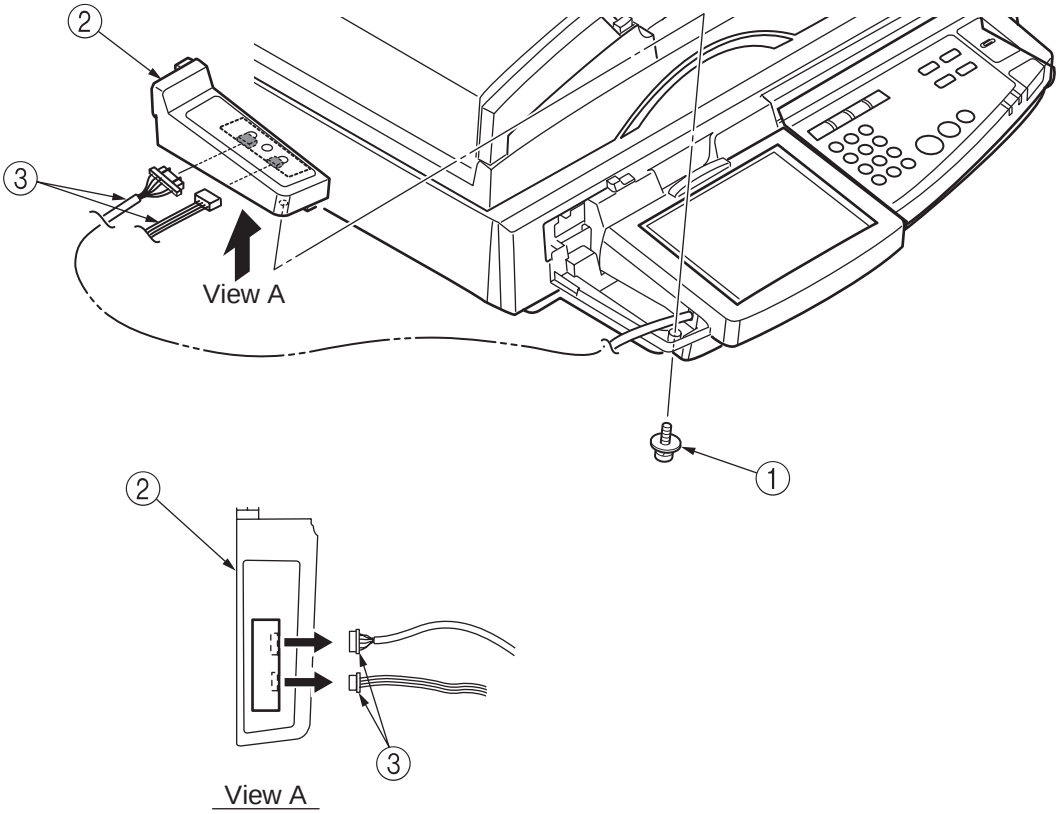


6.2.2 Flatbed Unit

6.2.2.1 Cover Panel Left Ass'y

(1) Remove the screw ① to detach the cover panel left ass'y ②.

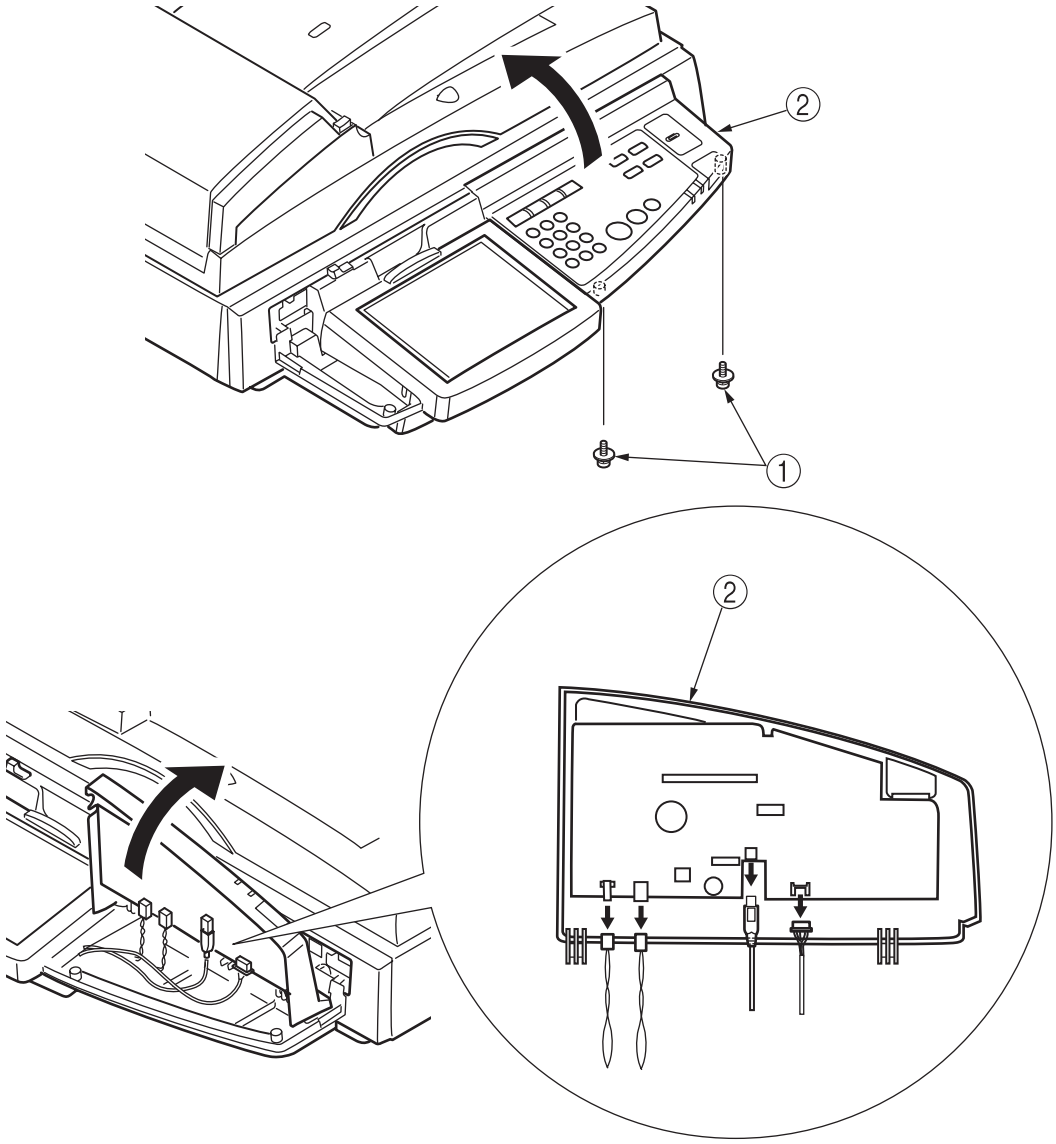
(2) Remove the two connectors ③.

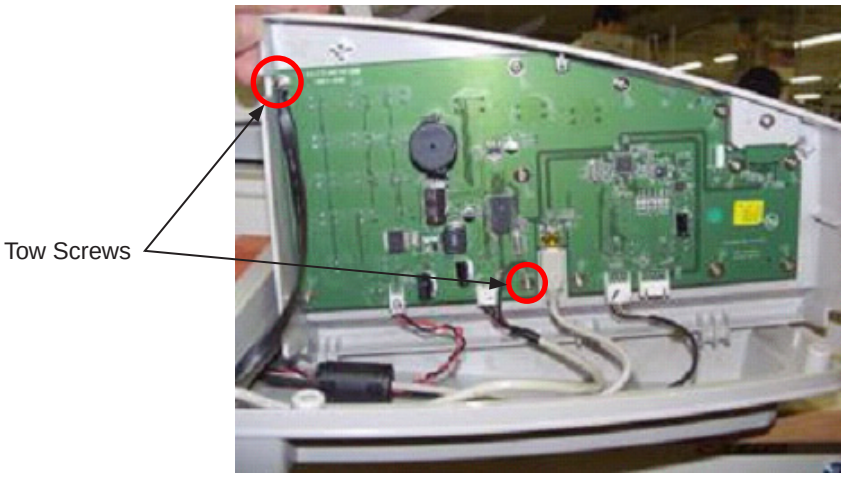


6.2.2.2 Cover Panel Right Ass'y

(1) Remove the screws ① to detach the cover panel right ass'y ②.

(2) Remove the four connectors.





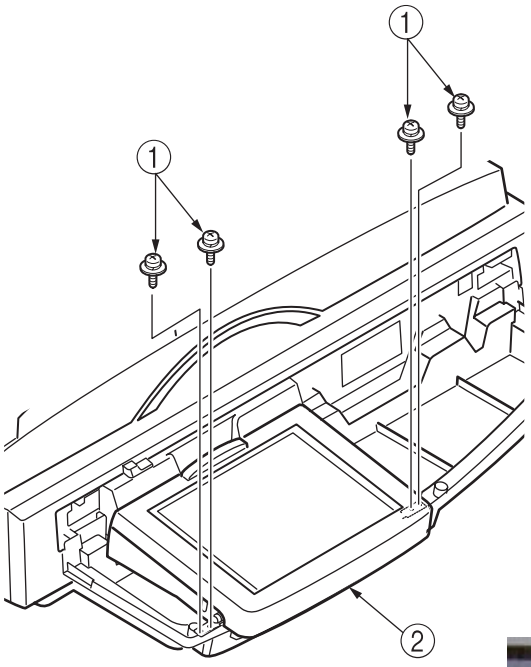
6.2.2.3 LCD Ass'y

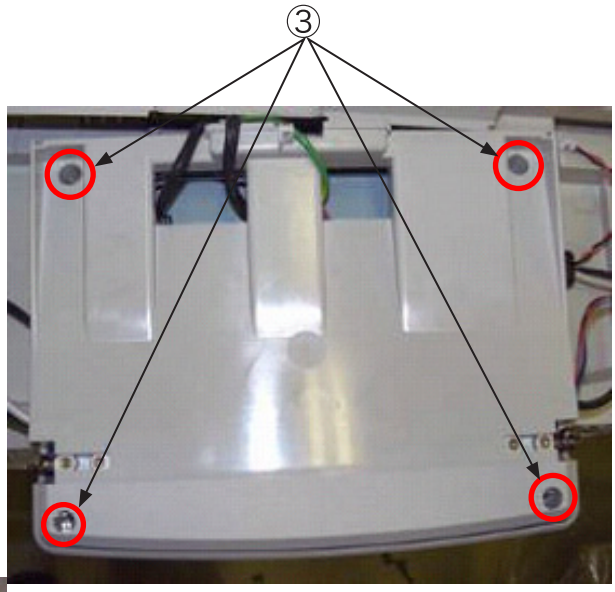
(1) Referring to sections 6.2.2.1 and 6.2.2.2, remove the cover panel right ass'y and the cover panel left ass'y

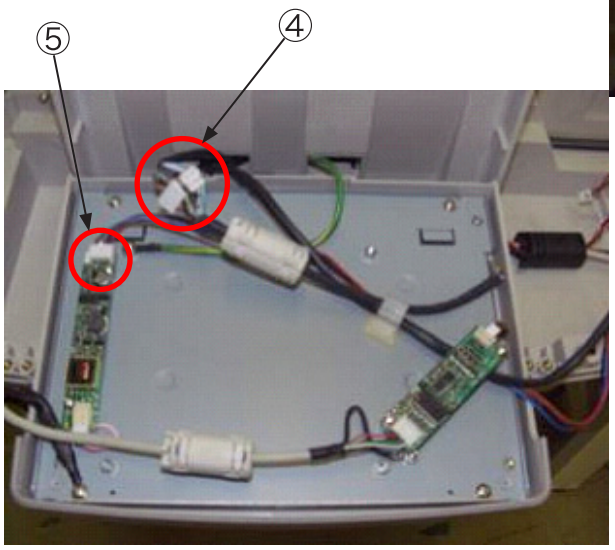
(2) Remove the screws ① to detach the LCD ass'y ②, and reverse the ass'y.

(3) Remove the four screws ③ and the cover.

(4) Remove the two connectors of the cable ④, and then the screw ⑤.



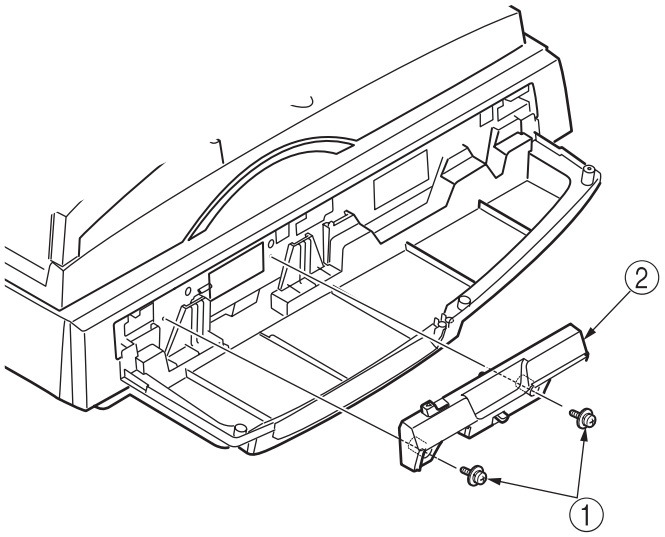




6.2.2.4 Cover Spacer Panel Ass'y

(1) Referring to sections 6.2.2.1 through 6.2.2.3, remove the cover panel right ass'y, the cover panel left ass'y and the LCD ass'y.

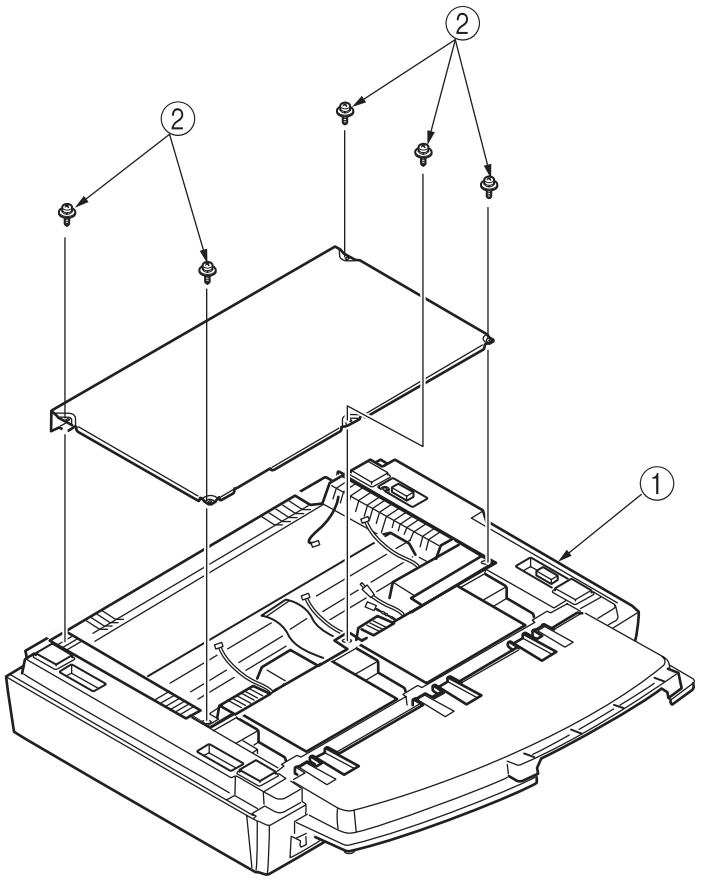
(2) Remove the screws ① to detach the cover spacer panel ass'y ②.



6.2.2.5 Ass'y Main Board

(1) Referring to section 6.2.1.4, remove the ADF unit. Reverse the flatbed unit ①.

(2) Remove the screws ② and all the connectors.



7. OTHER MAINTENANCE

7.1 Timer Setting

C9850MFP/CX3641MFP/ES3640ProMFP scanners have no timer setting functions. The printers to work with the scanners set and store timer information. The scanners require no timer resetting through their maintenance.

8. SETTINGS FOR OPTION

8.1 Settings Related to Fax Option

This section describes the information about the fax option of each C9850MFP scanner.

8.1.1 Country Code

This section describes the procedure for changing Country Code by selecting the fax function in the maintenance mode menu of a C9850MFP scanner. Country Code must be set when a fax board is installed on the engine of the scanner.

Note: Perform the following operations after executing Factory Default from Admin Setup menu item in the printer LCD menu.

For USA set for Country Code:

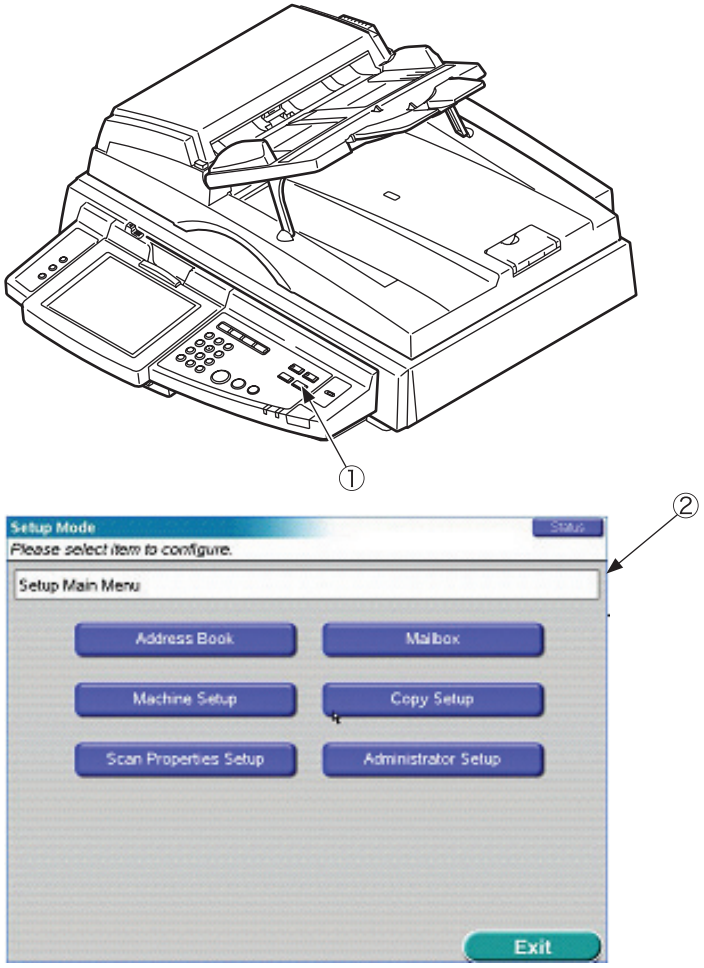
No further operations are required.

For USA not set for Country Code:

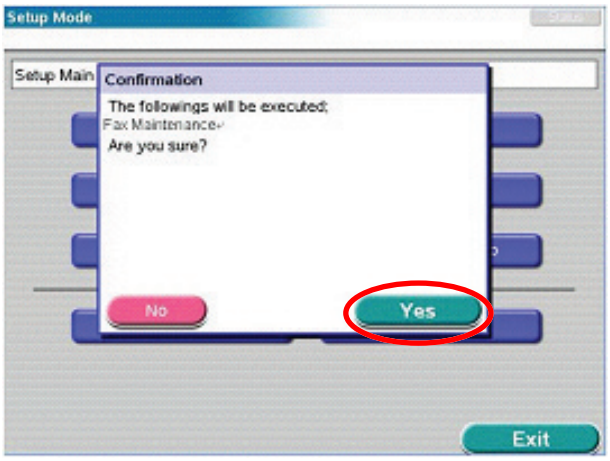
Follow steps (1) through (6) described in 8.1.2, Procedure for Changing Settings, to change Country Code back to USA, for example, from German, and follow the steps again to reset it to an appropriate country (Germen in this example).

8.1.2 Procedure for Changing Settings

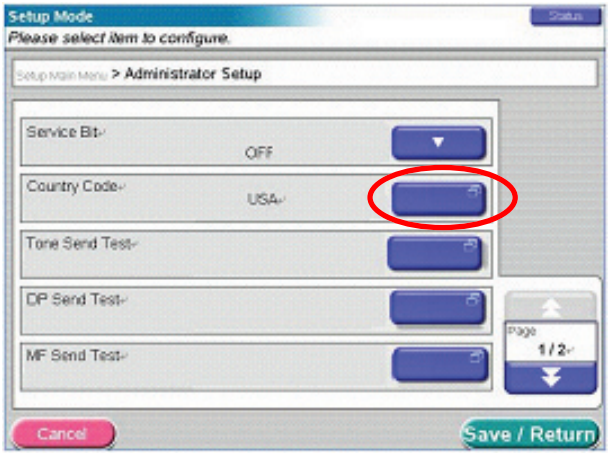
(1) Press the SETUP key ①. The Setup Main Menu screen ② opens.



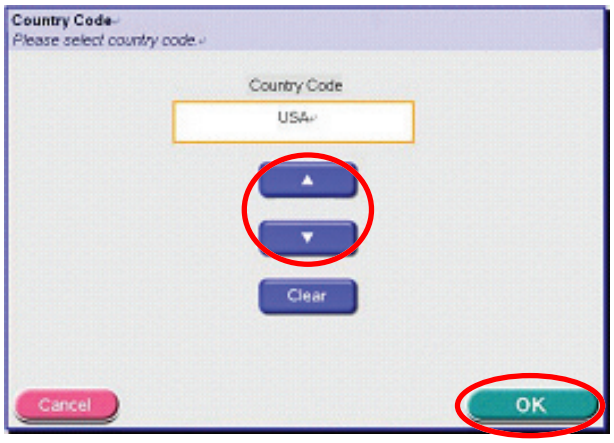
(2) Click 1, then 9, then 3, then 7, and then 1, on the numeric keypad. The confirmation dialog box appears. Touch Yes.



(3) The fax maintenance screen is switched. Touch Country Code.



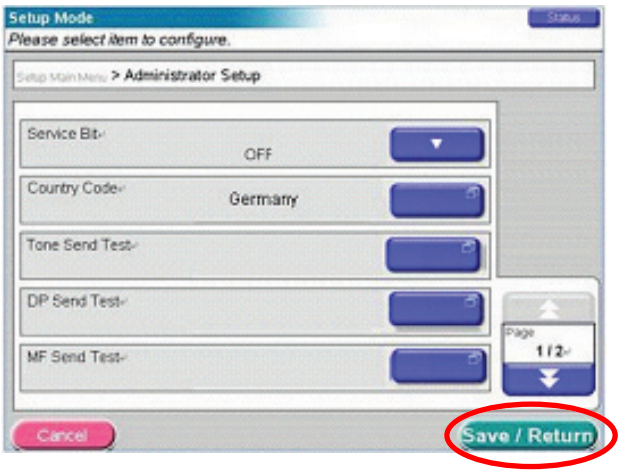
(4) Touch the up-arrow or down-arrow button to select an appropriate Country Code, and touch OK (refer to Country Code Table on the next page for Country Code detail).



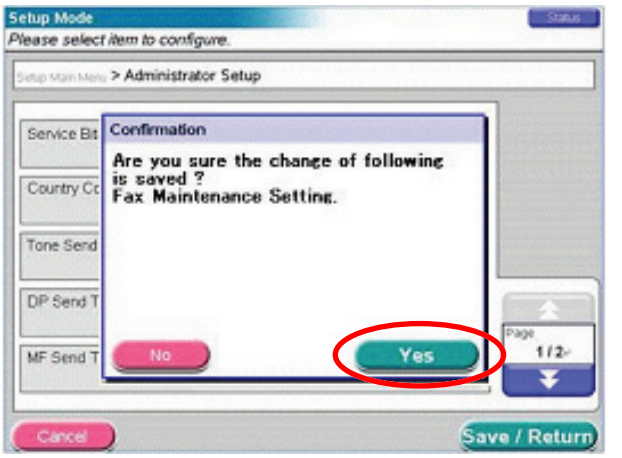
Country Code Table

Item	Value(factory default is marked with asterisk (*))	Description
Country codes	* USA International Great Britain Ireland Norway Sweden Finland Denmark Germany Hungary Czechoslovakia Poland Switzerland Austria Belgium Holland France Portugal SpainItalia Greece Australia New Zealand Singapore Hong Kong Latin America Mexico China Russia Taiwan Japan	Configures the scanner's fax modem board so as that to conform it to the telephone line standards of the country set for this item.

(5) Touch Save/Return.



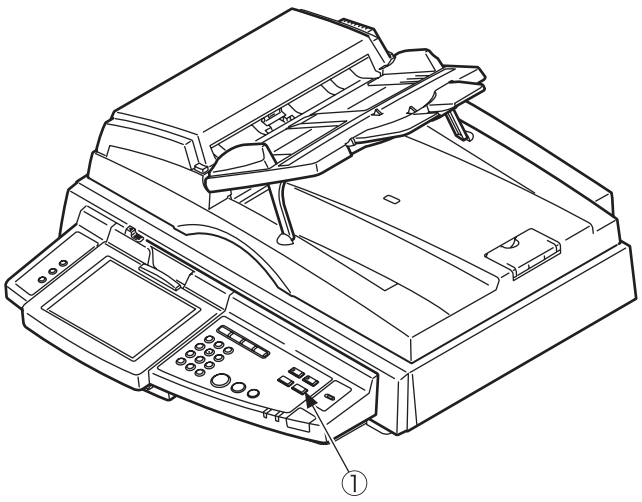
(6) Touch Yes.



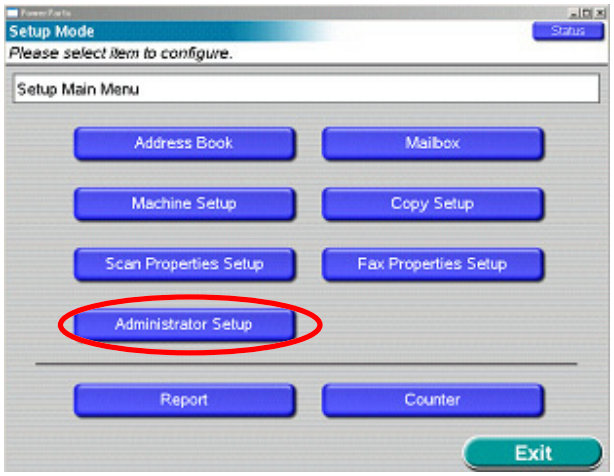
(7) The Country Code change is complete.

Note: Only with change of the Country Code setting to New Zealand, follow the following procedure to change the setting for Ring Response:

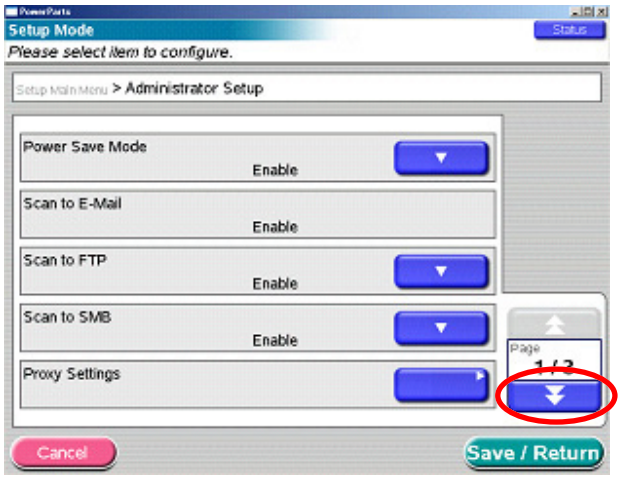
(1) Press the SETUP key ①.



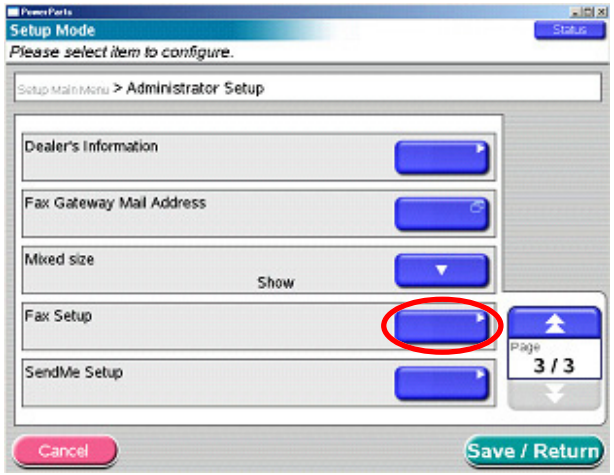
(2) Touch Administrator Setup.



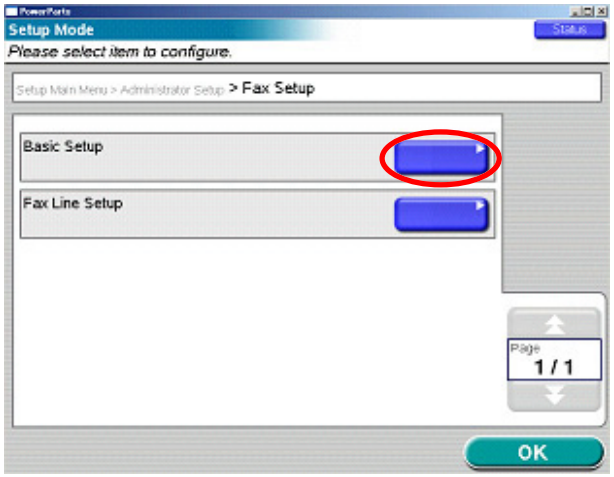
(3) Touch the page turn key.



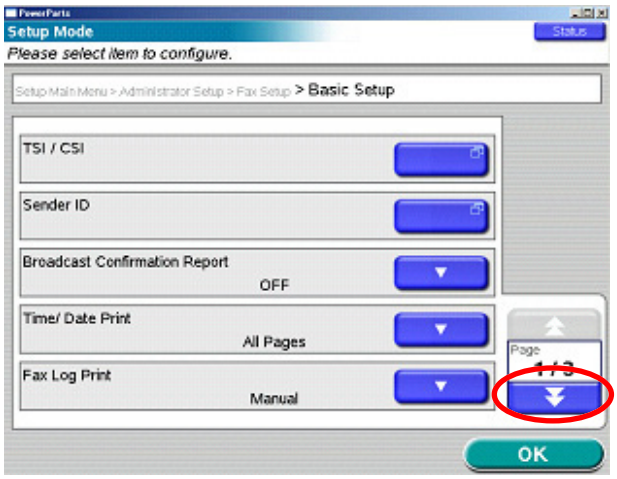
(4) Touch Fax Setup on page 3/3.



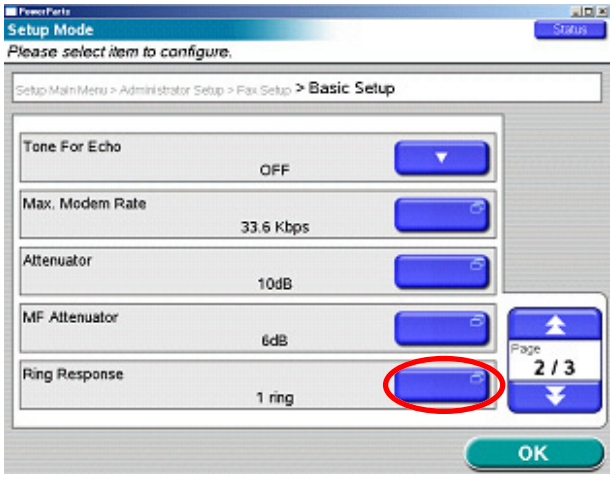
(5) Touch Basic Setup.



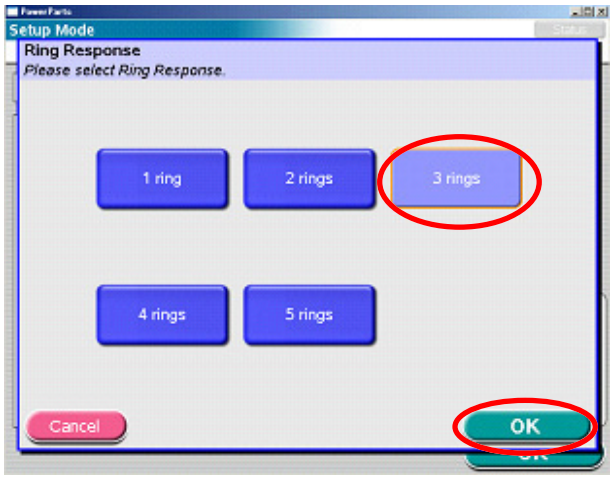
(6) Touch the page turn key.



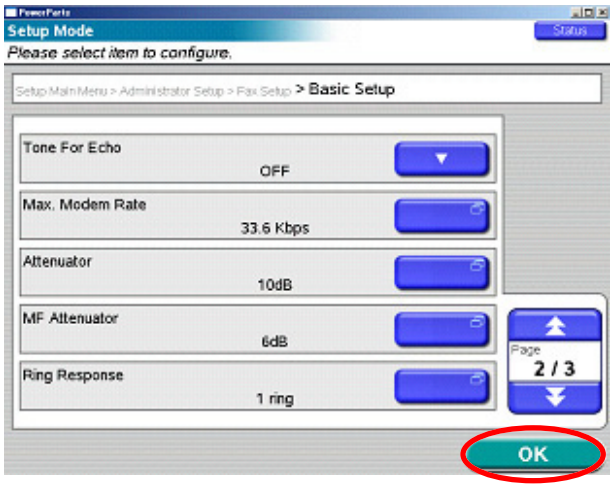
(7) Touch Ring Response on page 2/3.



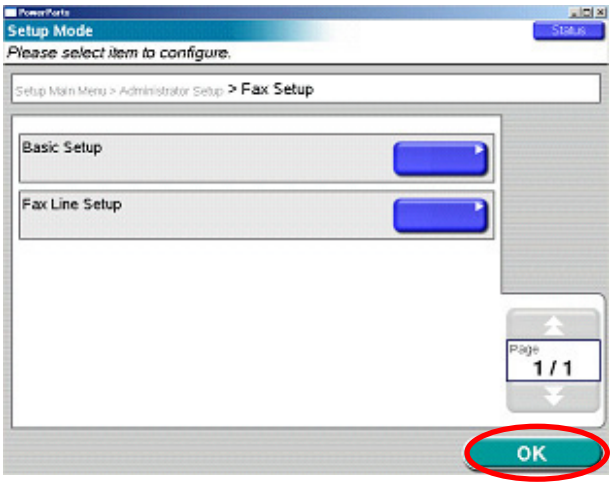
(8) Touch 3 rings (1 ring to 3 rings) and OK.



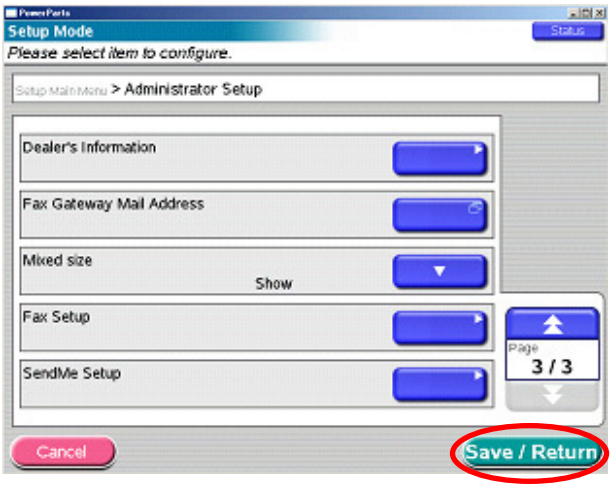
(9) Touch OK.



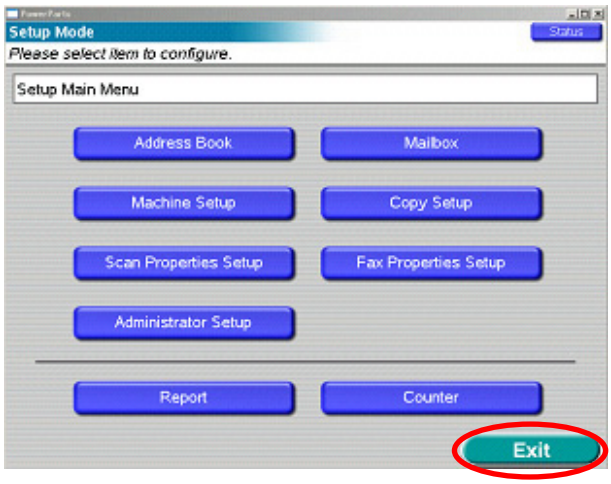
(10) Touch OK.



(11) Touch Save/Return.



(12) Touch Exit.



The change of the Ring Response setting is complete.